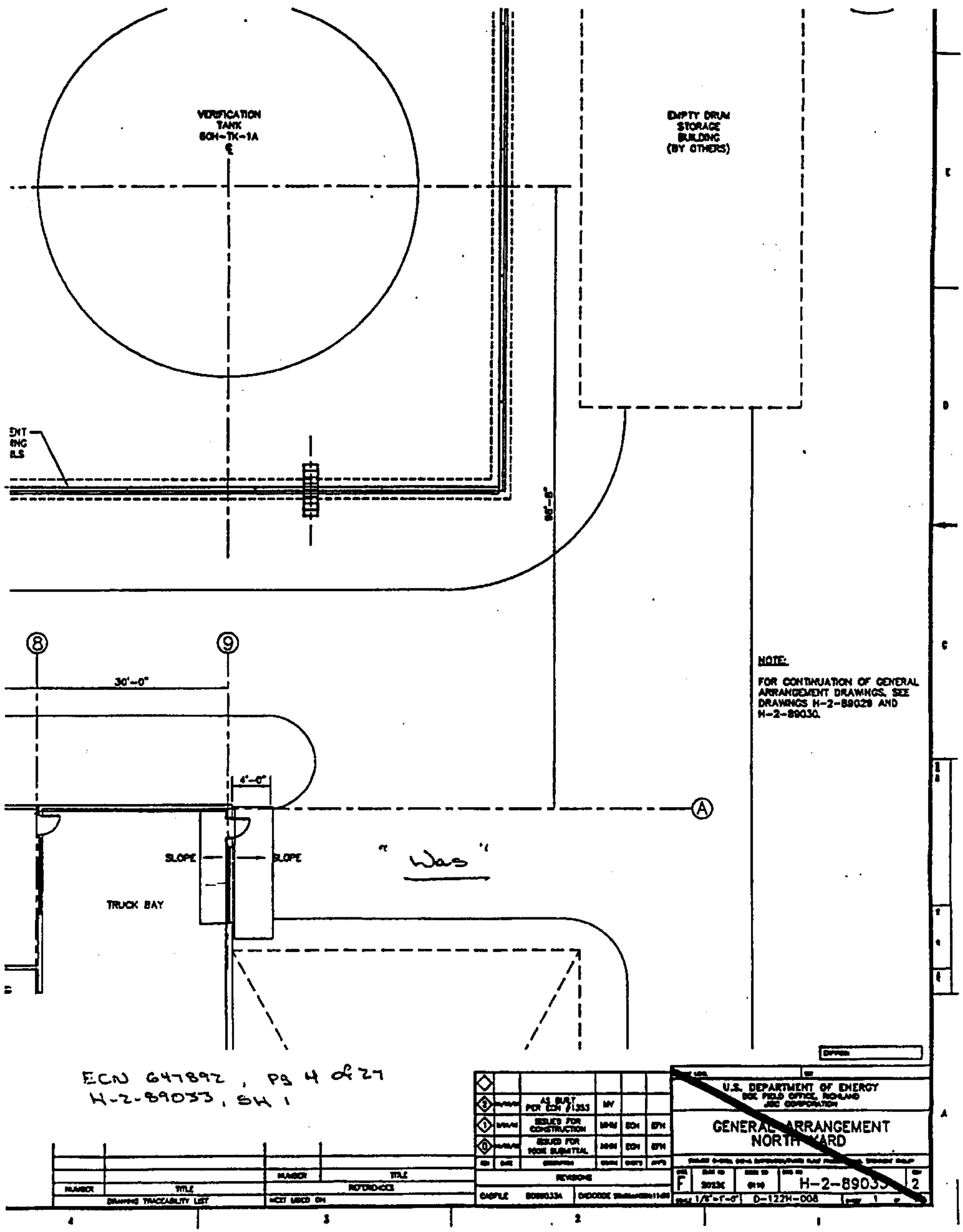

VERIFICATION TANK 60H-TK-1A
EMPTY DRUM STORAGE BUILDING (BY OTHERS)
98'-8"
30'-0"
4'-0"
SLOPE
SLOPE
TRUCK BAY
"Was"
NOTE:
FOR CONTINUATION OF GENERAL ARRANGEMENT DRAWINGS, SEE DRAWINGS H-2-89029 AND H-2-89030.
ECN 647892, pg 4 of 27
H-2-89033, SH 1
AS BUILT PER ECN #1353
ISSUED FOR CONSTRUCTION
ISSUED FOR 100% SUBMITTAL
REVISIONS
DRAWING TRACEABILITY LIST
REFERENCES
NEXT USED ON
U.S. DEPARTMENT OF ENERGY
DOE FIELD OFFICE, RICHLAND
GENERAL ARRANGEMENT
NORTH YARD
H-2-89033
D-122H-008
1/8"=1'-0"

APPENDIX 4B

DETAILED DRAWINGS FOR THE 200 AREA EFFLUENT TREATMENT FACILITY CONTAINER STORAGE AREA AND TANK SYSTEMS

Outstanding ECNs

S

ENGINEERING CHANGE NOTICE

Page 1 of 2

1. ECN 647892

Proj. ECN

2. ECN Category (mark one)	3. Originator's Name, Organization, MSIN, and Telephone No.	4. USQ Required?	5. Date
Supplemental [X] Direct Revision [] Change ECN [] Temporary [] Standby [] Supersedure [] Cancel/Void []	AF Crane, 32230, S6-72, 372-3152	[] Yes [X] No	09/21/98
	6. Project Title/No./Work Order No.: Access Stairs/A4055	7. Bldg./Sys./Fac. No.: 2025E	8. Approval Designator: N/A
	9. Document Numbers Changed by this ECN (includes sheet no. and rev.): See Blk. 13a	10. Related ECN No(s).: N/A	11. Related PO No.: N/A

12a. Modification Work	12b. Work Package No.	12c. Modification Work Complete	12d. Restored to Original Condition (Temp. or Standby ECN only)
[X] Yes (fill out Blk. 12b) [] No (NA Blks. 12b, 12c, 12d)	EL-98-00588/M CRC 9/23/98	Design Authority/Cog. Engineer Signature & Date	N/A Design Authority/Cog. Engineer Signature & Date

13a. Description of Change

H-2-89033, Sh 1, Rev 2
H-2-89036, Sh 1, Rev 2
H-2-89039, Sh 1, Rev 4
H-2-89040, Sh 1, Rev 2
H-2-89044, Sh 1, Rev 4

13b. Design Baseline Document? [X] Yes [] No

H-2-89063, Sh 1, Rev 3
H-2-89068, Sh 1, Rev 3
H-2-89069, Sh 1, Rev 3
H-2-89078, Sh 1, Rev 4

See Continuation Sheet

14a. Justification (mark one)

Criteria Change	[]	Design Improvement	[X]	Environmental	[]	Facility Deactivation	[]
As-Found	[]	Facilitate Const	[]	Const. Error/Omission	[]	Design Error/Omission	[]

14b. Justification Details

Installation of stairways is required to provide safe access when carrying equipment into the surge and verification containments.

Informal design review performed by RJ Huth.

15. Distribution (include name, MSIN, and no. of copies)

MW Bowman	S6-72	(1)	RJ Huth	S6-72	(1)
AF Crane	S6-72	(1)*	JM Isdell	G3-17	(1)*
BS Darling	T4-61	(1)	NJ Sullivan	S6-72	(1)
DL Flyckt	S6-71	(1)	AK Yoakum	S6-71	(1)
JE Geary	S6-71	(1)	WCC Planning	S6-71	(1)*

*Advance Copy

RELEASE STAMP
SEP 23 1998
DATE:
STA: 30
HANFORD RELEASE
ID: 25

A-7900-013-2 (05/96) GEF095

ENGINEERING CHANGE NOTICE	Page 2 of 27	1. ECN (use no. from pg. 1) 647892

16. Design Verification Required	17. Cost Impact				18. Schedule Impact (days)	
	ENGINEERING		CONSTRUCTION			
[X] Yes	Additional	[] $	Additional	[] $	Improvement	[]
[] No	Savings	[] $	Savings	[] $	Delay	[]

19. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 13. Enter the affected document number in Block 20.

SDD/DD	[]	Seismic/Stress Analysis	[]	Tank Calibration Manual	[]
Functional Design Criteria	[]	Stress/Design Report	[]	Health Physics Procedure	[]
Operating Specification	[]	Interface Control Drawing	[]	Spares Multiple Unit Listing	[]
Criticality Specification	[]	Calibration Procedure	[]	Test Procedures/Specification	[]
Conceptual Design Report	[]	Installation Procedure	[]	Component Index	[]
Equipment Spec.	[]	Maintenance Procedure	[]	ASME Coded Item	[]
Const. Spec.	[]	Engineering Procedure	[]	Human Factor Consideration	[]
Procurement Spec.	[]	Operating Instruction	[]	Computer Software	[]
Vendor Information	[]	Operating Procedure	[]	Electric Circuit Schedule	[]
OM Manual	[]	Operational Safety Requirement	[]	ICRS Procedure	[]
FSAR/SAR	[]	IEFD Drawing	[]	Process Control Manual/Plan	[]
Safety Equipment List	[]	Cell Arrangement Drawing	[]	Process Flow Chart	[]
Radiation Work Permit	[]	Essential Material Specification	[]	Purchase Requisition	[]
Environmental Impact Statement	[]	Fac. Proc. Samp. Schedule	[]	Tickler File	[]
Environmental Report	[]	Inspection Plan	[]		[]
Environmental Permit	[]	Inventory Adjustment Request	[]		[]

20. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

Document Number/Revision	Document Number/Revision	Document Number Revision
N/A		

21. Approvals

	Signature	Date		Signature	Date
Design Authority	AF Crane	9-21-98	Design Agent	AF Crane	9-21-98
Cog. Eng.			PE		
Cog. Mgr.	NJ Sullivan	9-22-98	QA		
QA			Safety		
Safety			Design		
Environ.			Environ.		
Other			Other		
RJ Huth Informal Design Review		9.22.98			

DEPARTMENT OF ENERGY

Signature or a Control Number that tracks the Approval Signature

ADDITIONAL

H-2-89033, Sh 1, Zone D-3: Replace ladder with stairway.

H-2-89036, Sh 1, Zone E-4: Replace ladder with stairway.

H-2-89039, Sh 1, Zone B-4: Replace ladder with stairway & show new sidewalk.

Zone E-4: Replace ladder with stairway.

H-2-89040, Sh 1, Zone B-4: Replace ladder with stairway & show new sidewalk.

Zone E-4: Replace ladder with stairway.

H-2-89044, Sh 1, Zone B-4: Replace ladder with stairway & show new sidewalk.

Zone E-4: Replace ladder with stairway.

H-2-89063, Sh 1, Zone F-2: Replace ladder with stairway. Delete 8'-9" dimension and ladder & crossover centerline callout. Change Section 4, Dwg. 89069 callout to read "See Section For Foundation Information".

H-2-89068, Sh 1, Zone C-3: Replace ladder with stairway. Delete 10'-0" & 3'-5 1/2" dimensions, landing and ladder & crossover centerline callout. Change callout to read "See Section For Foundation Information" with reference to Dwg. 89069, Section 4.

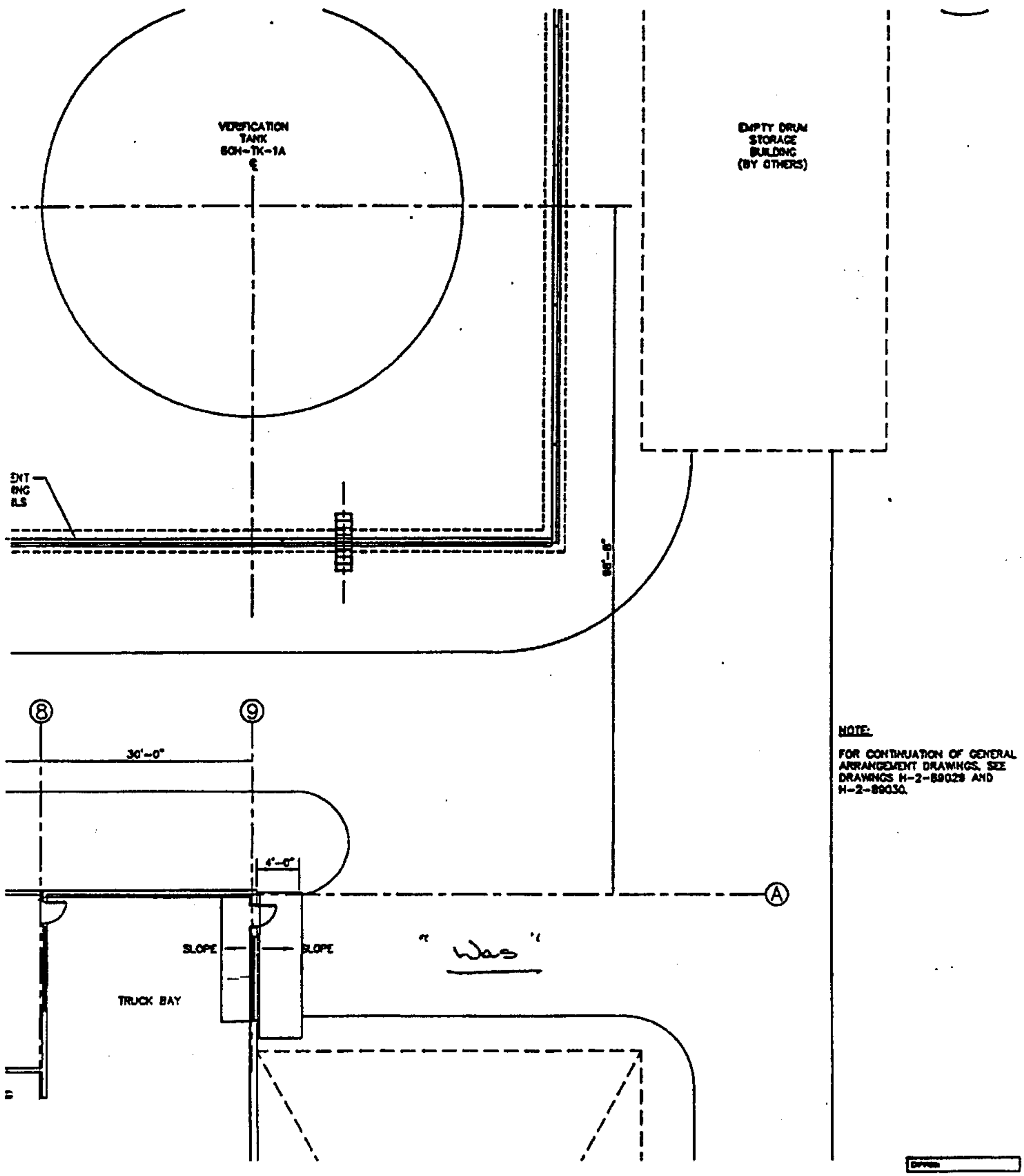
H-2-89069, Sh 1, Zone A-6: Add "minimum" to foundation width dimension (2'-0") callout. Change foundation text to read "Ladder Or Stairway Concrete Foundation (Locate In Field)". Change ladder description text to read "Aluminum Pre-Engineered Ship Ladder With Platform & Return, O'Keefe's Model 522-10 Or Equal, Or Aluminum Pre-Engineered Stairway. See VI Supp. 50054 For Stairway Detail."

H-2-89078, Sh 1, Zone A-7: Change detail title to "Ladder Or Stairway Step Off Pad".

Zone B-6: Change callout to "Ladder Or Stairway" from "Ladder".

Zone B-7: Add "minimum" to step off pad length dimension (38").

Zone B-8: Add "minimum" to step off pad width dimension (30").



NOTE:

FOR CONTINUATION OF GENERAL ARRANGEMENT DRAWINGS, SEE DRAWINGS H-2-89029 AND H-2-89030.

ECN 647892, Pg 4 of 27
H-2-89033, SH 1

NUMBER	TITLE	NUMBER	TITLE	
DRAWING TRACEABILITY LIST		NEXT USED ON	REFERENCES	

REV	DATE	DESCRIPTION			
2		AS BUILT PER ECN 71353	MV		
1		ISSUED FOR CONSTRUCTION		ECH	EFH
0		ISSUED FOR 100% SUBMITTAL		ECH	EFH

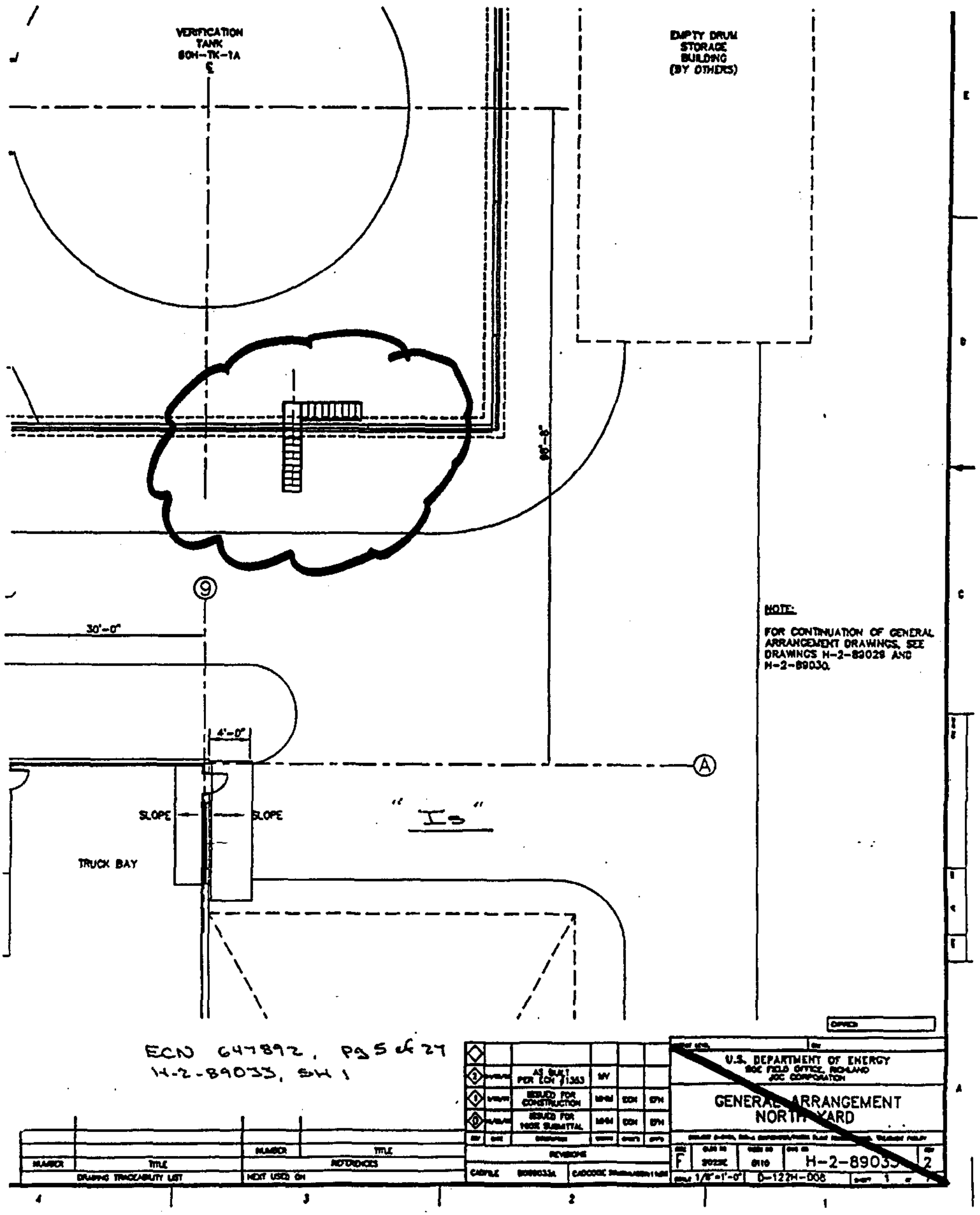
REVISIONS

U.S. DEPARTMENT OF ENERGY

GENERAL ARRANGEMENT NORTH YARD

F | 2023C | H-2-89033 | 2

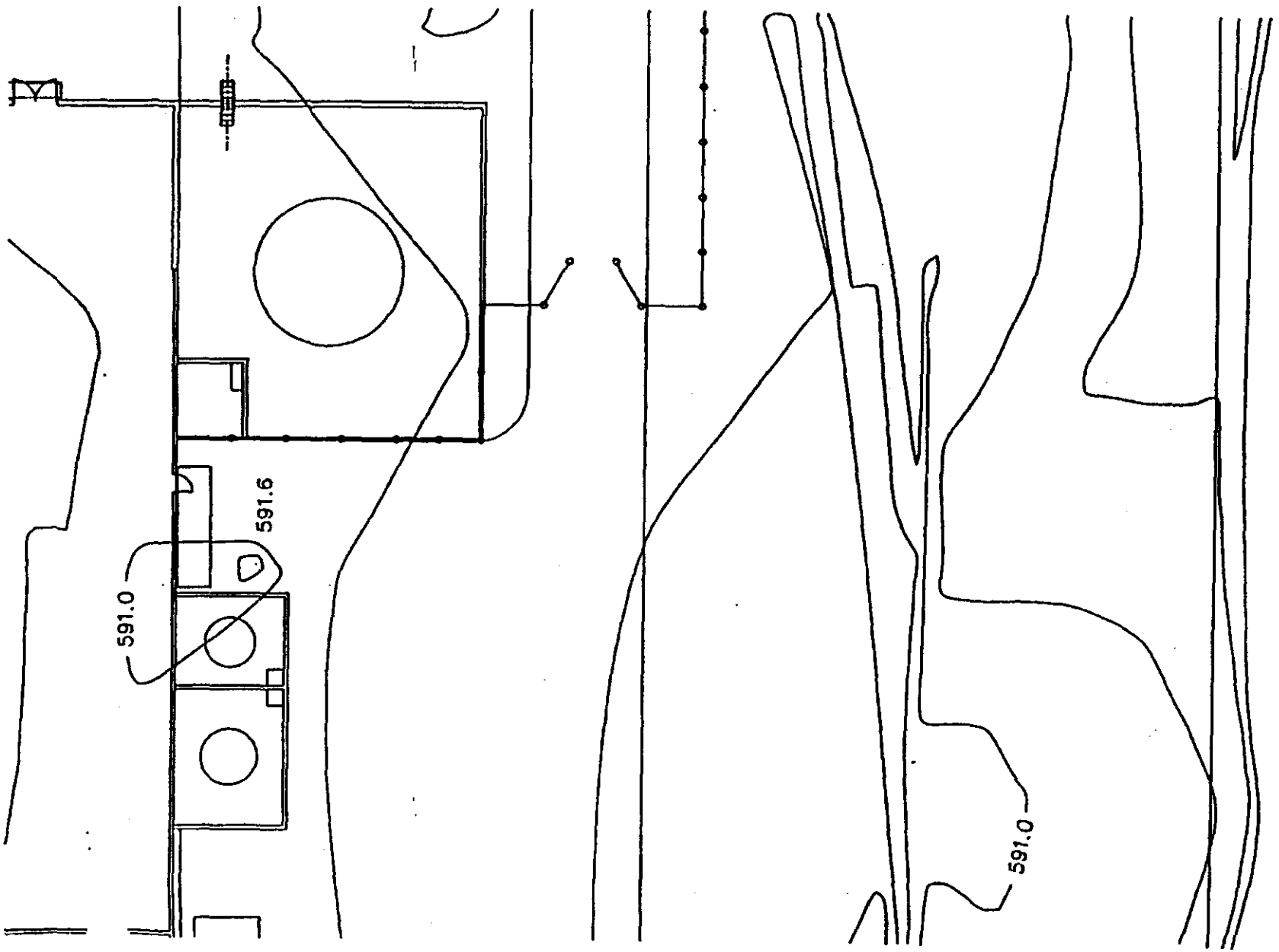
1/8" = 1'-0" | D-122H-008 | 1

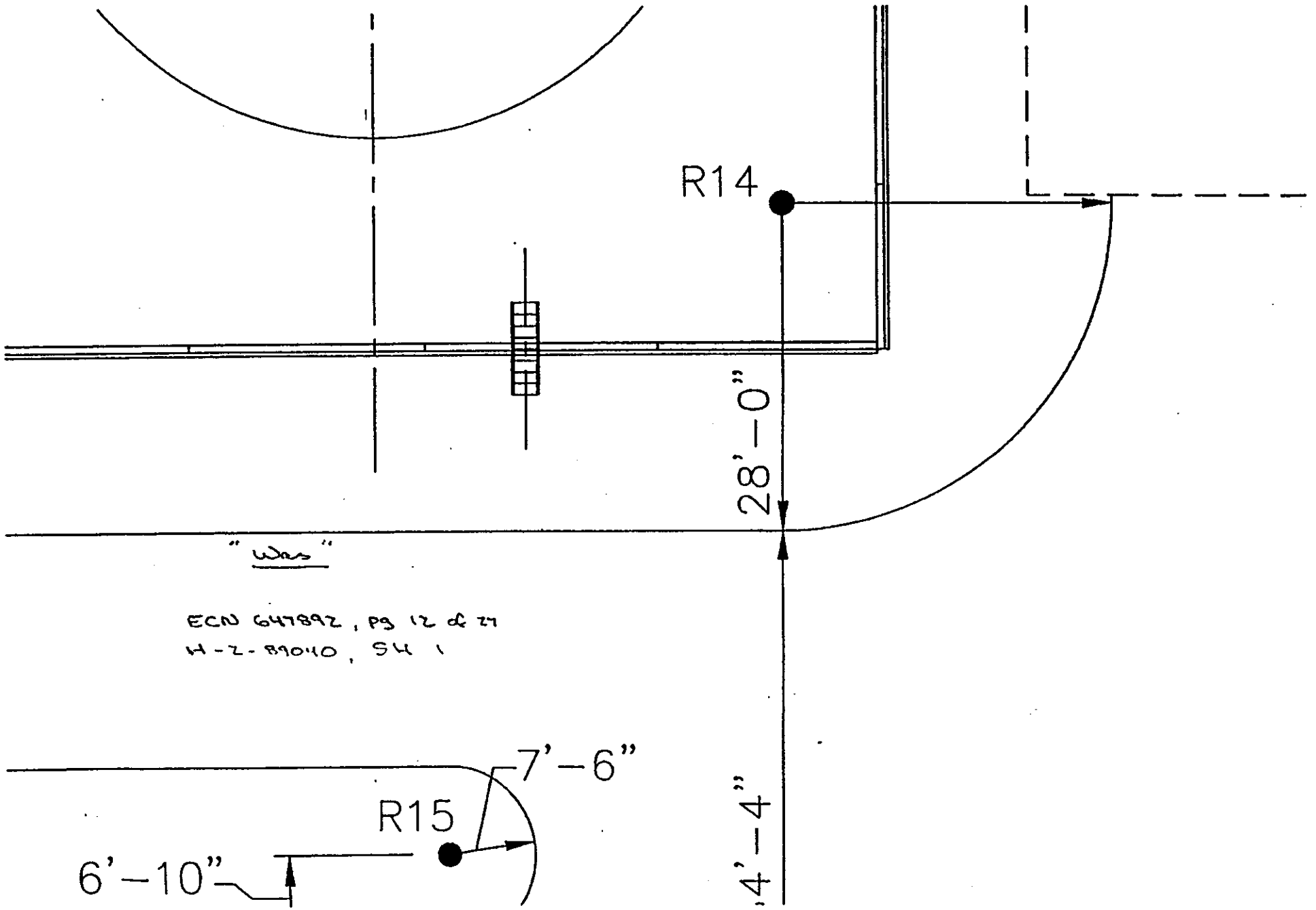


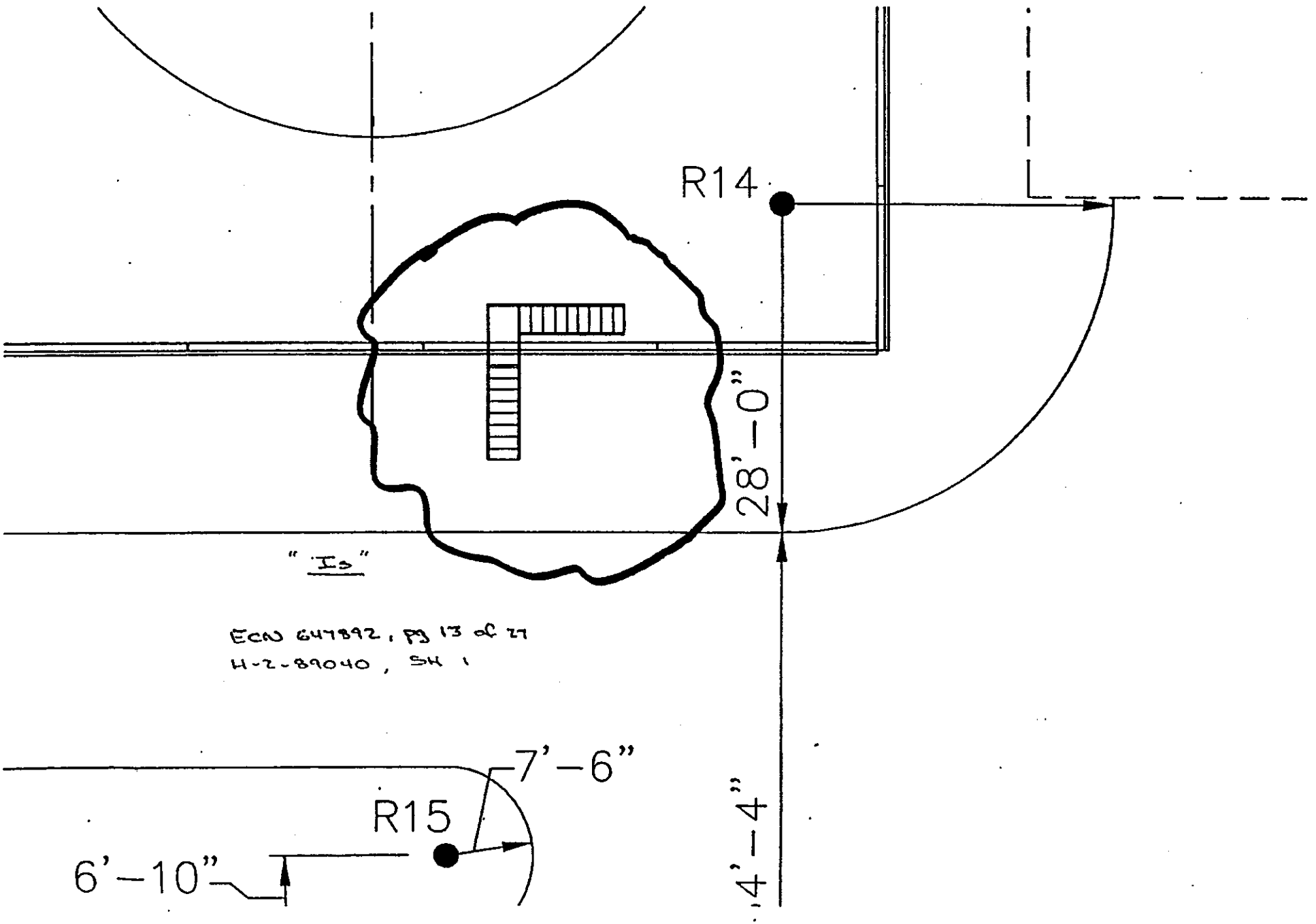
VERIFICATION TANK 80H-TK-1A
EMPTY DRUM STORAGE BUILDING (BY OTHERS)
80'-8"
9
30'-0"
4'-0"
A
SLOPE
SLOPE
TRUCK BAY
"Is"
NOTE:
FOR CONTINUATION OF GENERAL ARRANGEMENT DRAWINGS, SEE DRAWINGS H-2-89029 AND H-2-89030.
ECN 647892, pg 5 of 27
H-2-89033, SH 1
AS BUILT PER ECN 71363
ISSUED FOR CONSTRUCTION
ISSUED FOR 100% SUBMITTAL
REVISIONS
U.S. DEPARTMENT OF ENERGY
GENERAL ARRANGEMENT NORTH YARD
H-2-89033
D-122H-008
DRAWING TRACEABILITY LIST
NEXT USED ON
REFERENCES

"Das"

ECN 641892, Pg 6 of 27
H-2-89036, SH 1

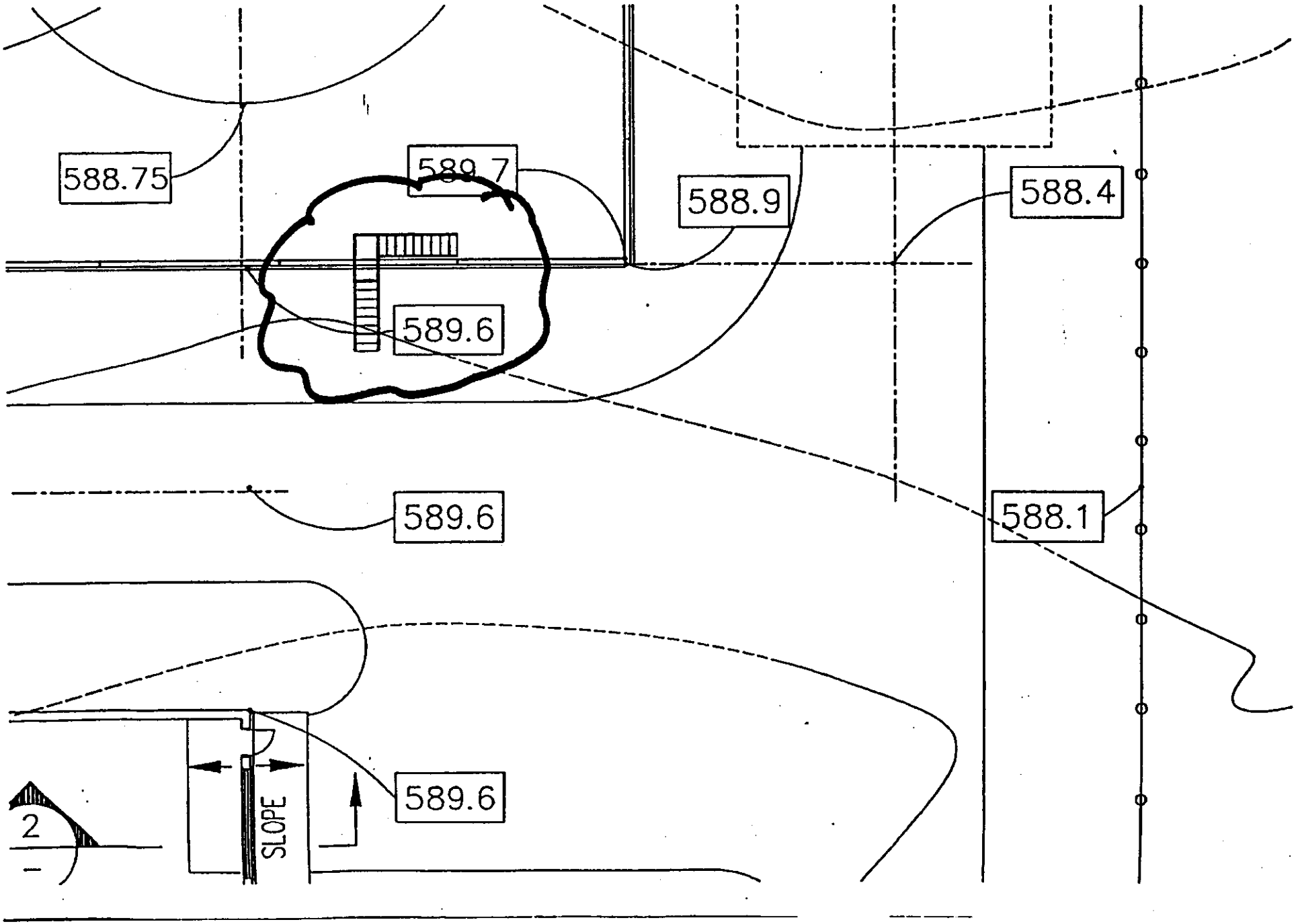



R14
28'-0"
"Was"
ECN 647892, Pg 12 of 27
H-2-89040, Sh 1
7'-6"
R15
6'-10"
4'-4"


R14
28'-0"
"Is"
ECN 647892, pg 13 of 27
H-2-89040, SH 1
7'-6"
R15
6'-10"
4'-4"

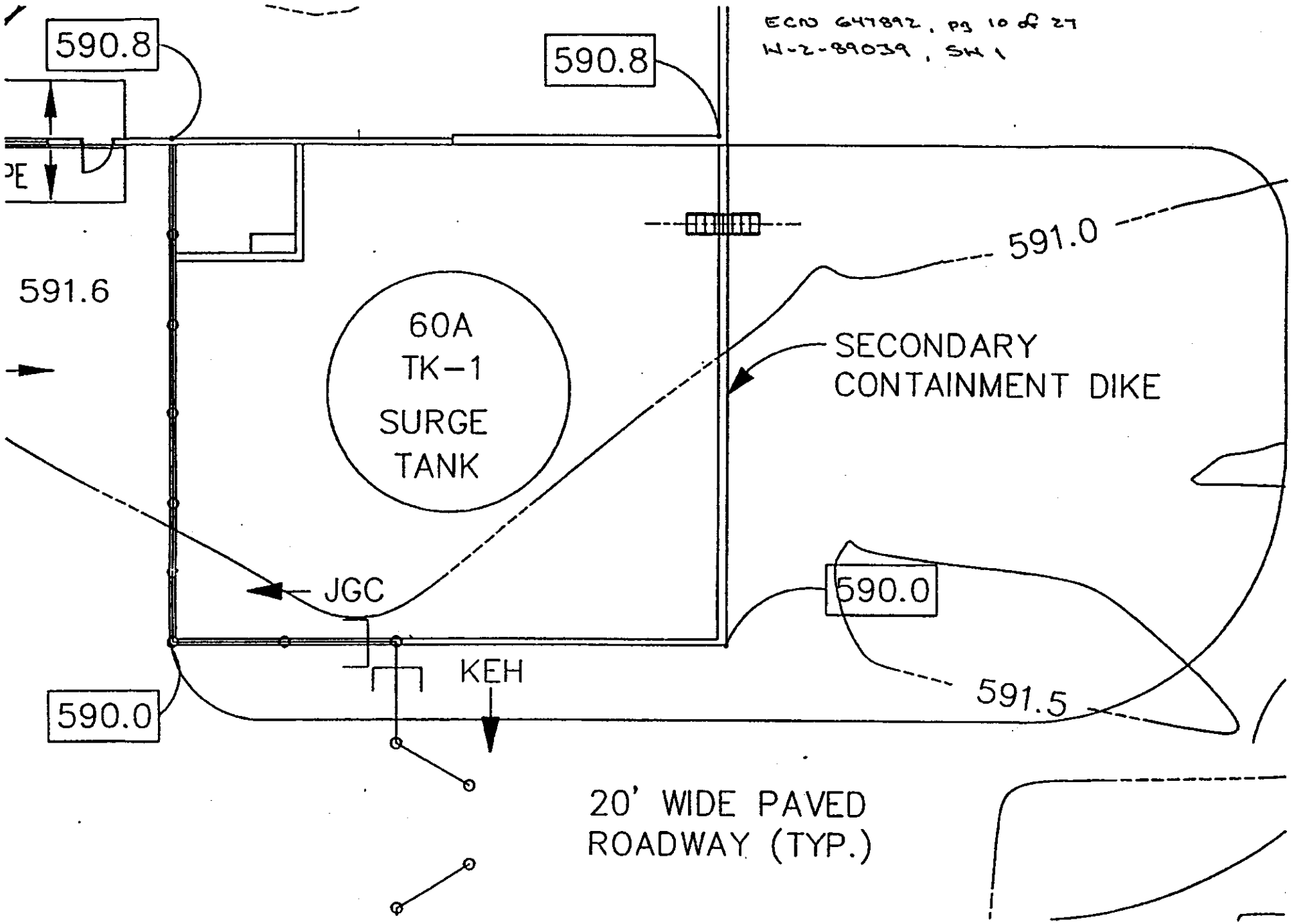
"Is"

ECN 647892, Pg 9 of 24
14-2-89039, Sht 1



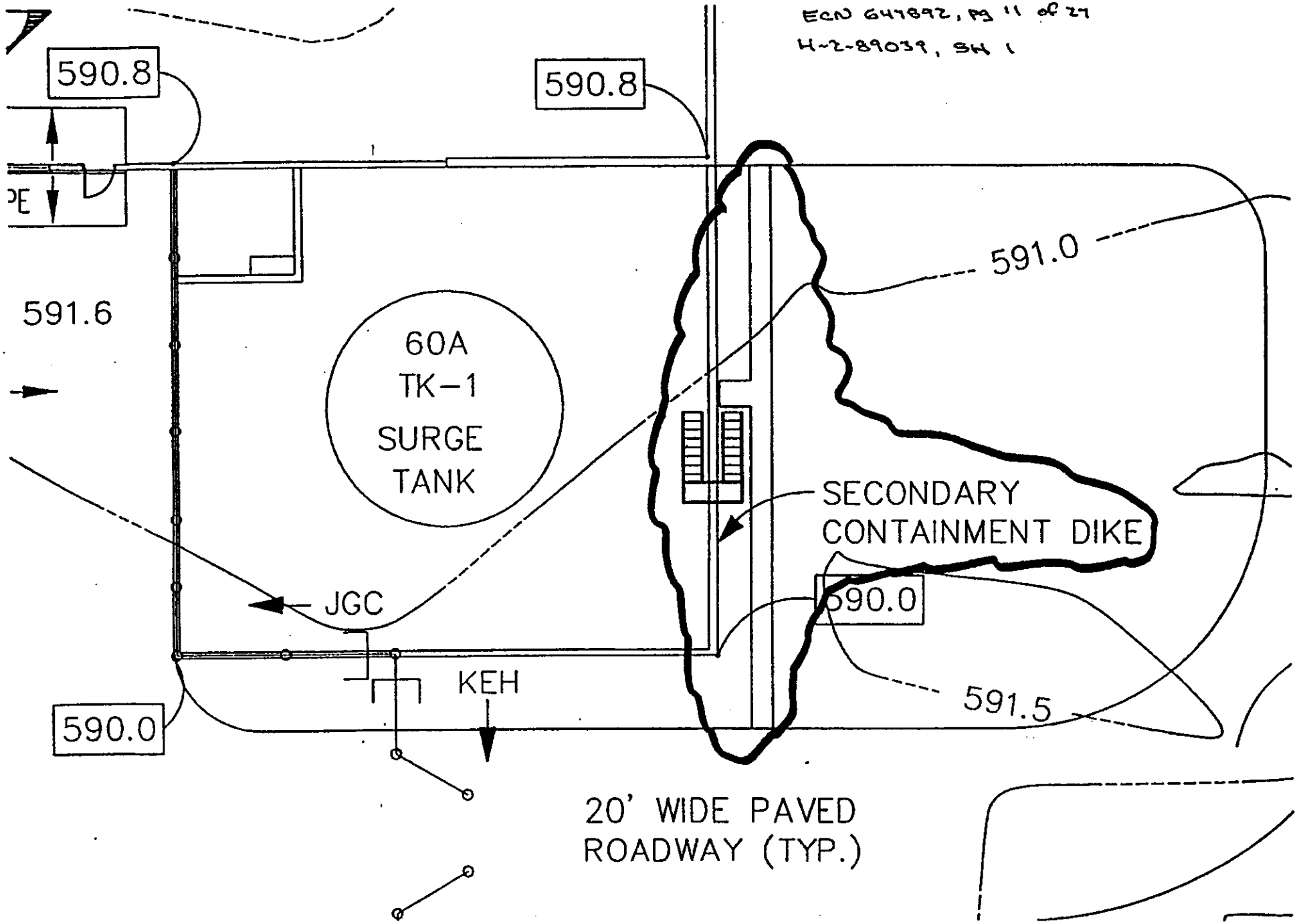
"Was"

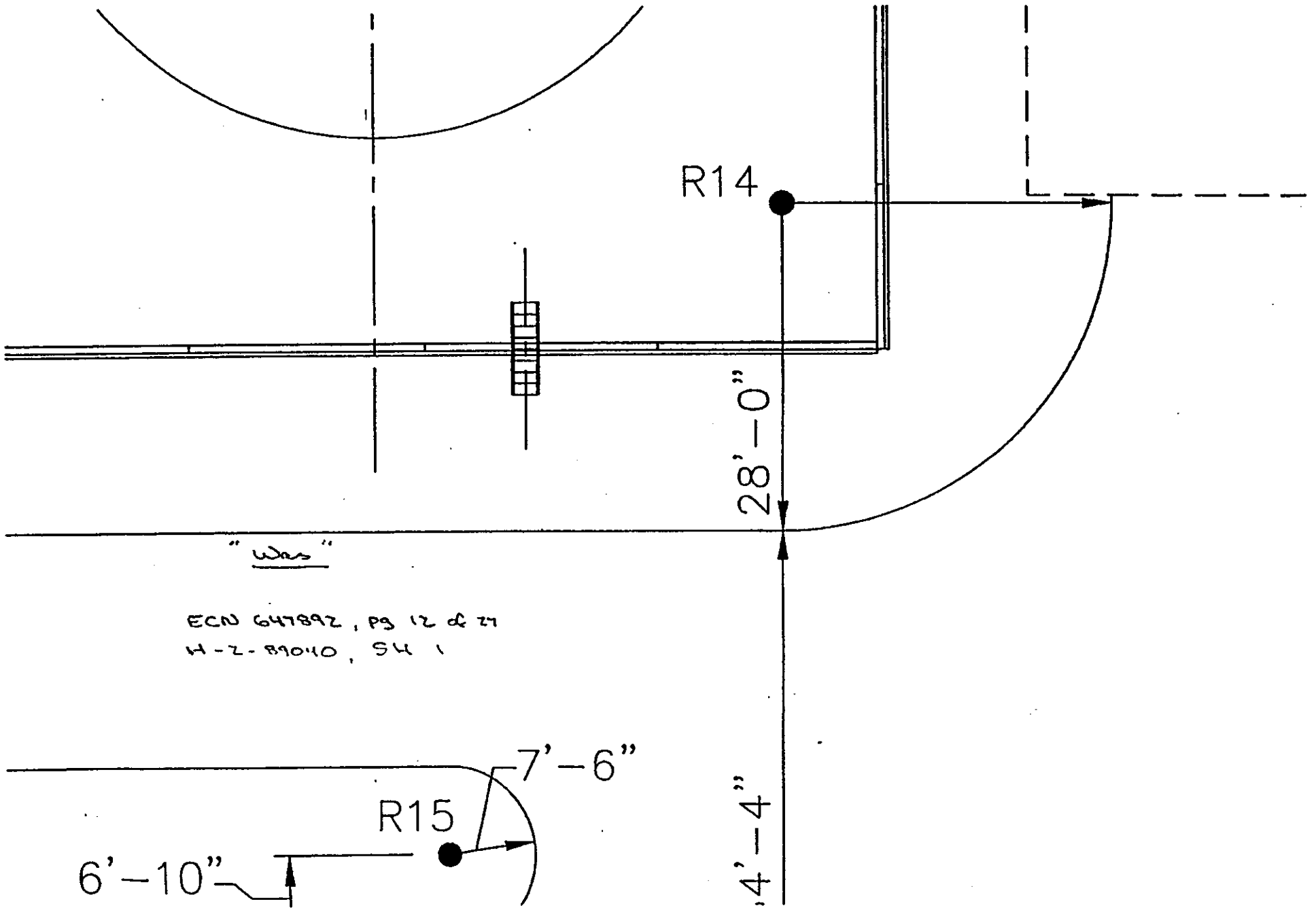
ECN 647892, pg 10 of 27
W-2-89039, SH 1

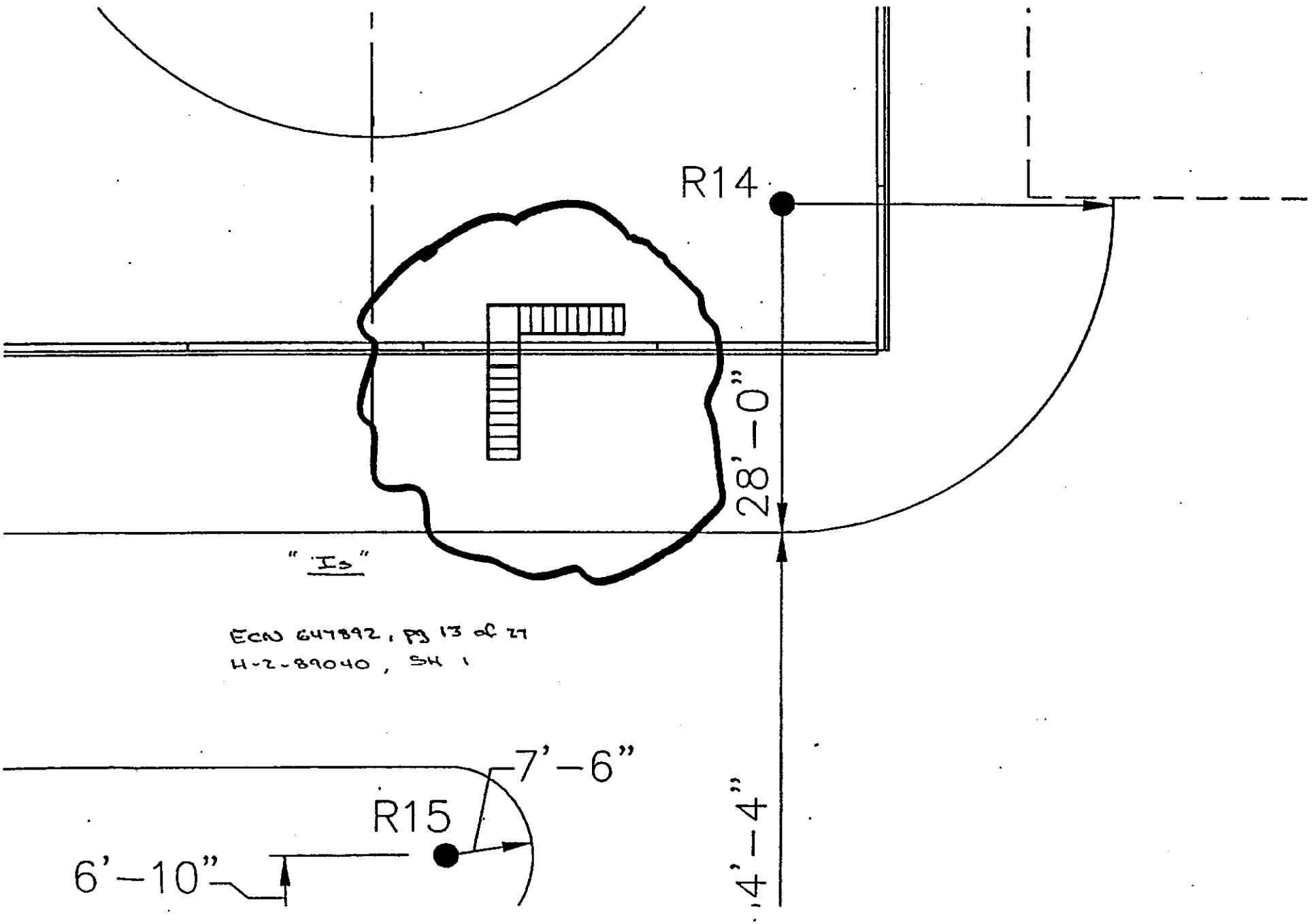


"Is"

ECN 647892, Pg 11 of 27
H-2-89039, SH 1

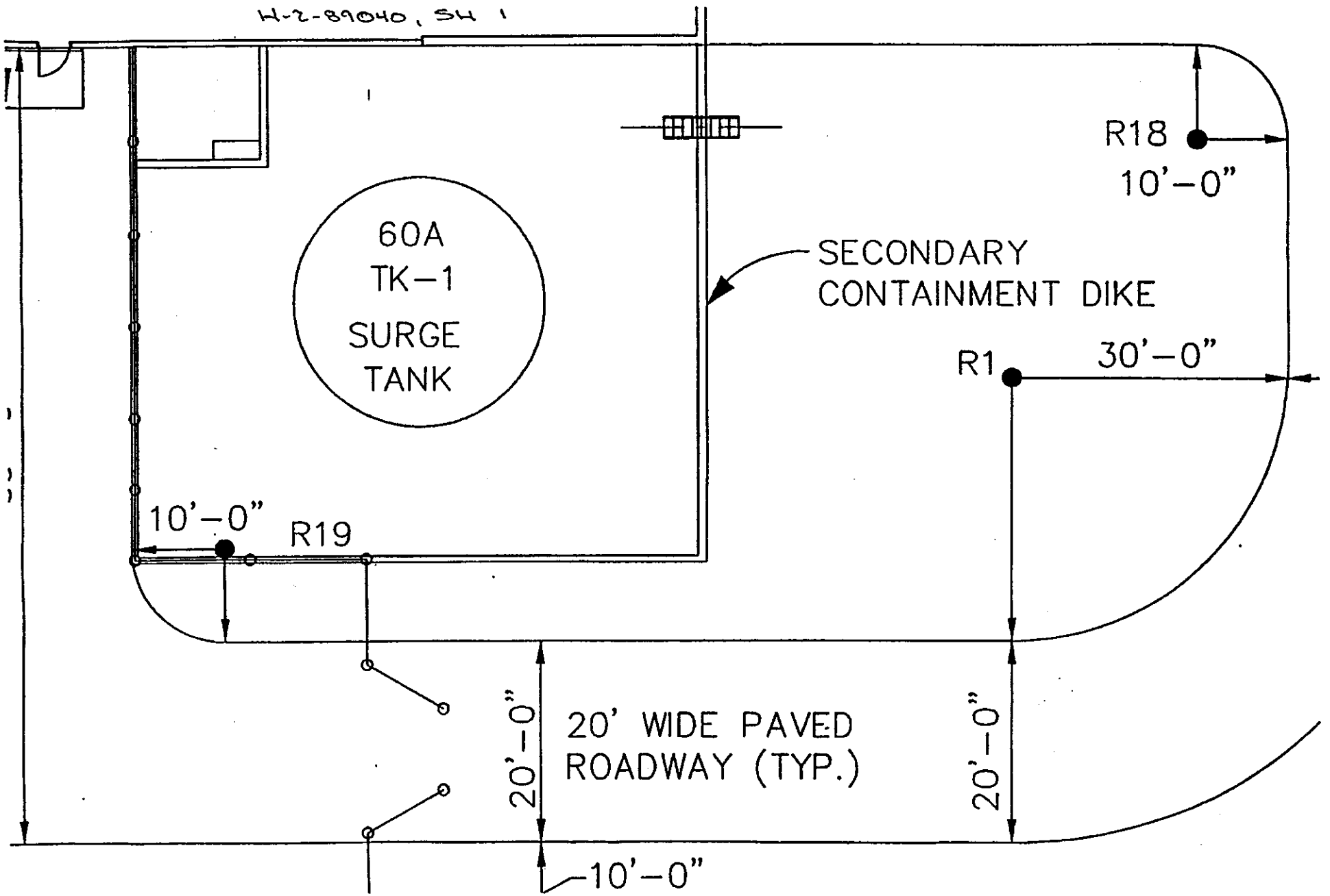



R14
28'-0"
"Was"
ECN 647892, Pg 12 of 27
H-2-89040, Sh 1
7'-6"
R15
6'-10"
4'-4"


R14
28'-0"
"Is"
ECN 647892, pg 13 of 27
H-2-89040, SH 1
7'-6"
R15
6'-10"
4'-4"

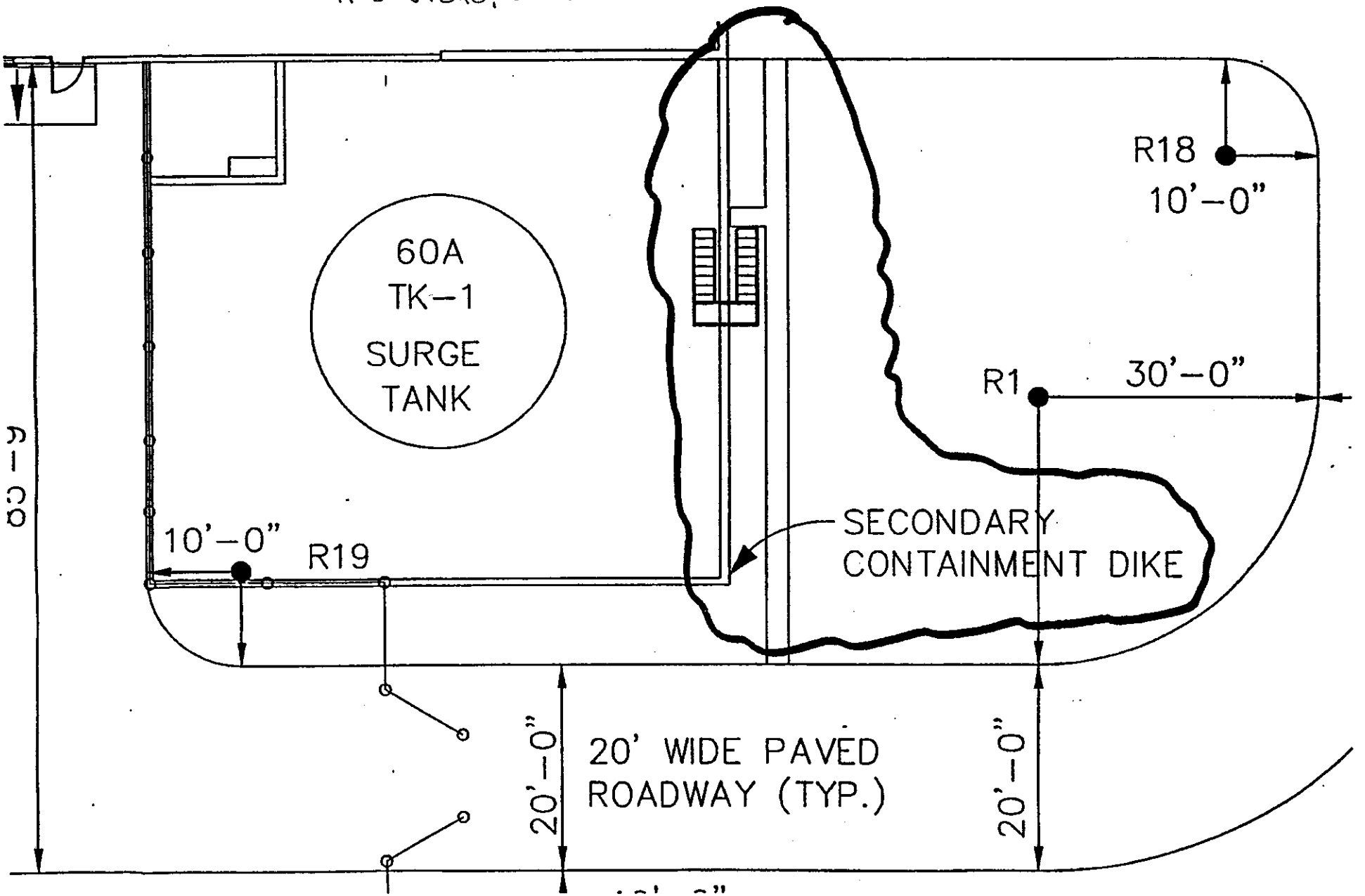
"Was"

ECN 647892, Pg 14 of 27
H-2-89040, SH 1



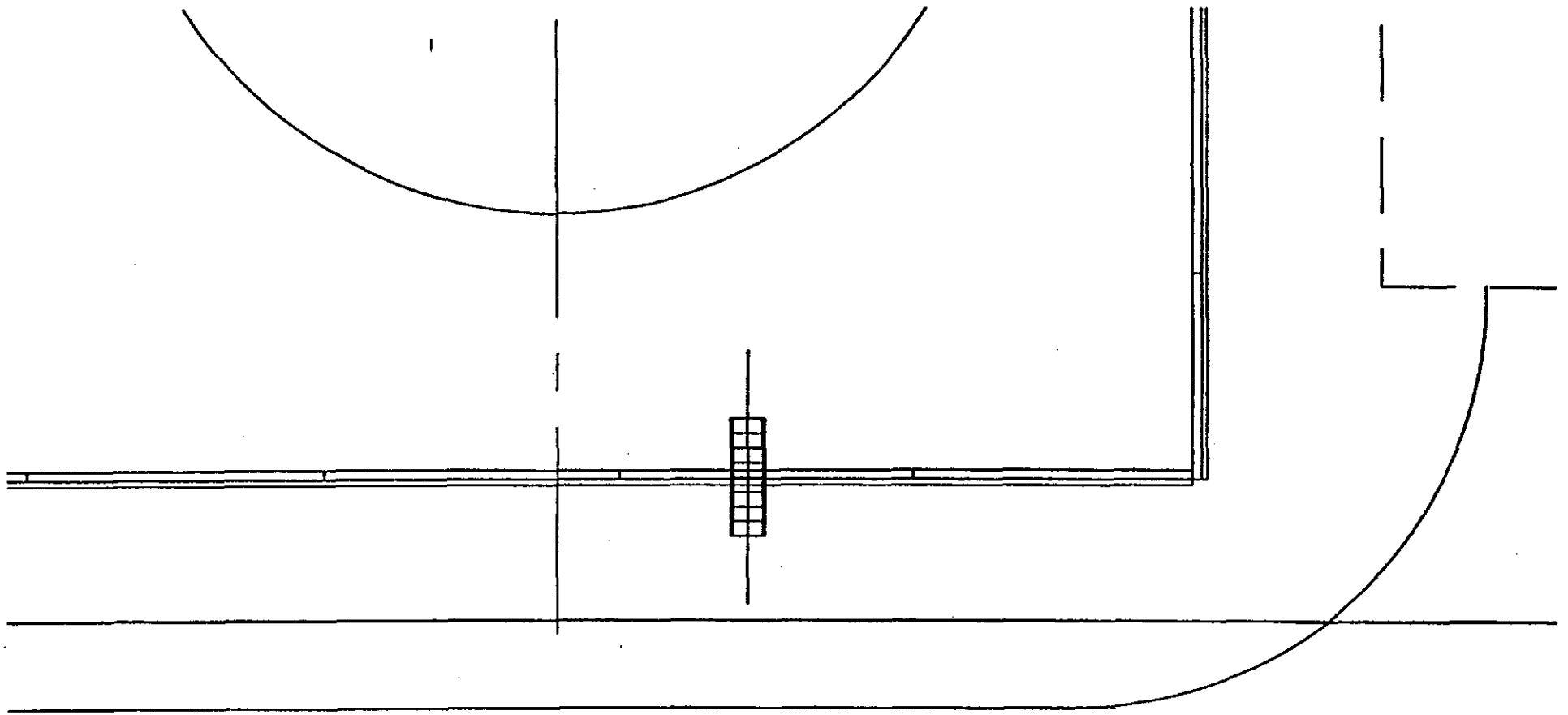
"I5"

ECN 647892, Pg 15 of 27
H-2-89040, SH 1



"WS"

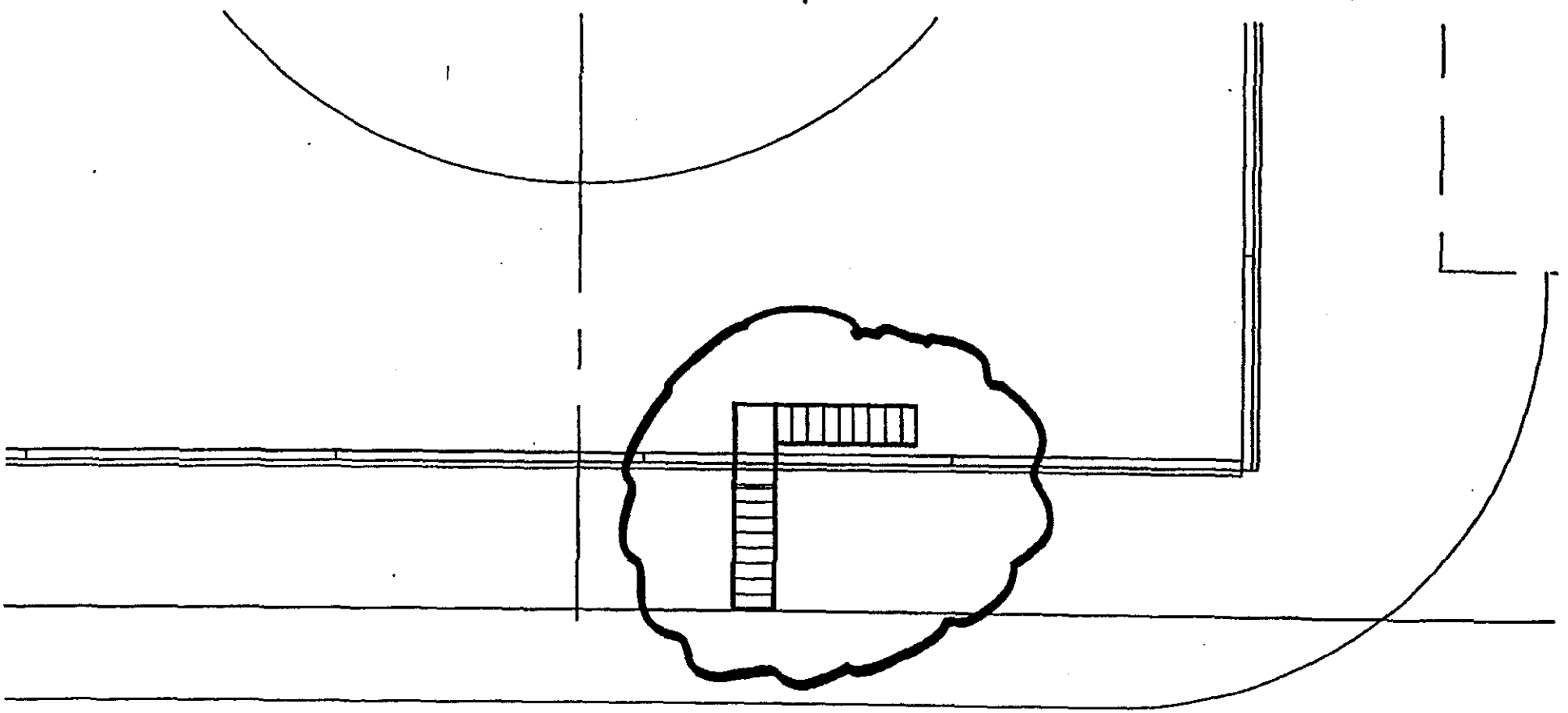
ECN 647892, Pg 16 of 27
H-2-89044, SH 1



℄ PIPE (–)4'–6"
BELOW GRADE

"Is"

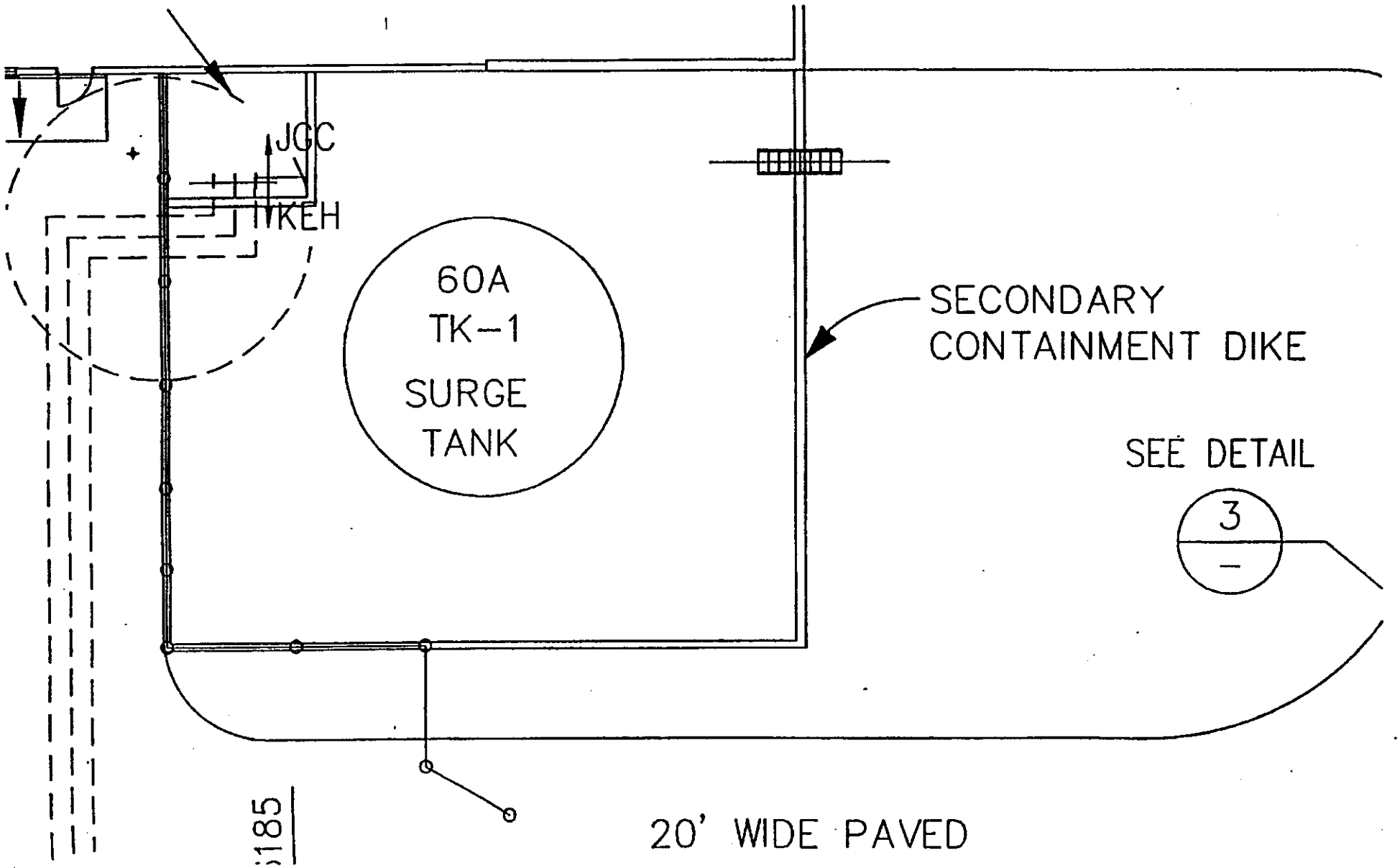
ECO 647892, pg 17 of 27
H-2-89044, SH 1



℄ PIPE (–)4'–6"
BELOW GRADE

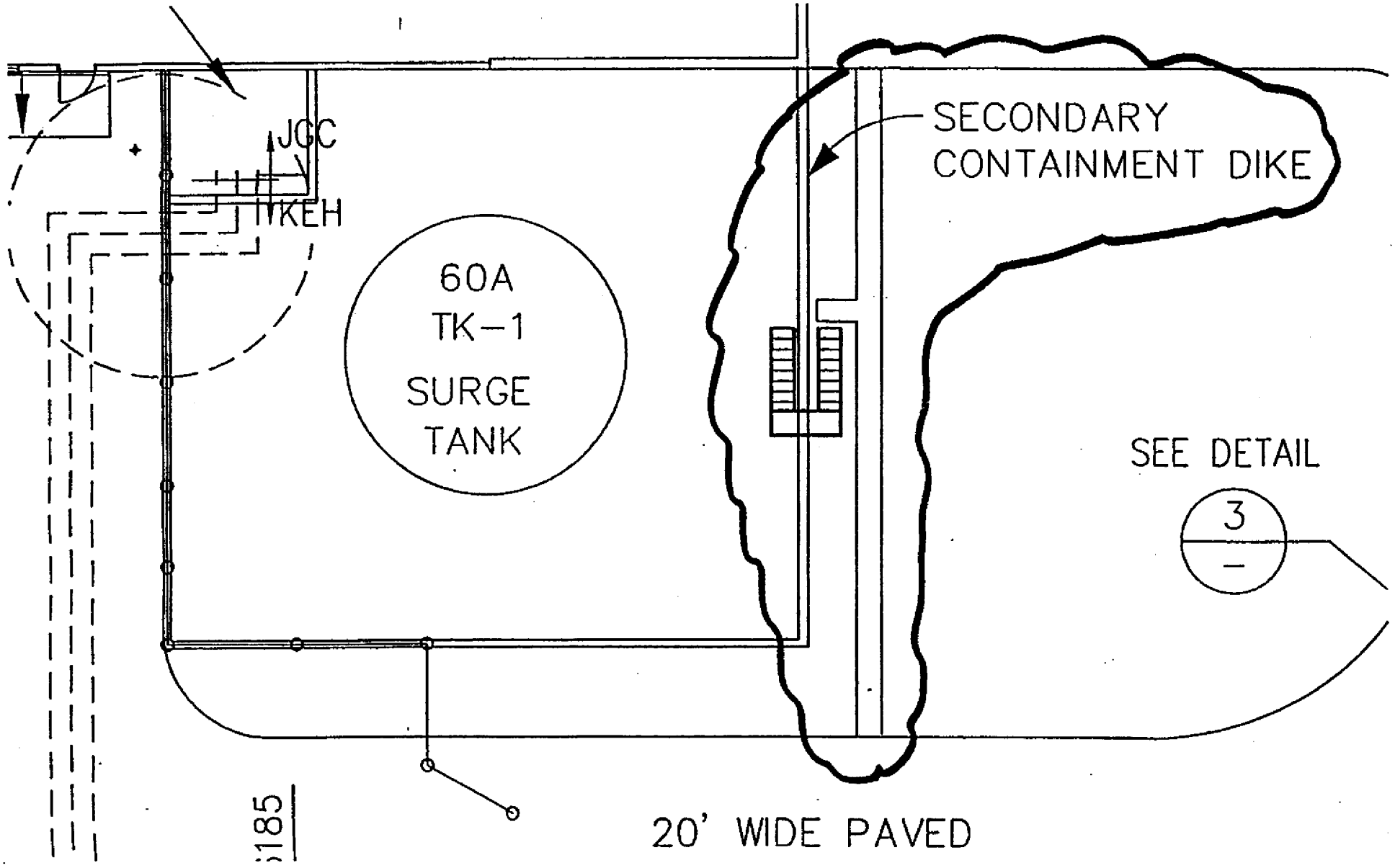
"Was"

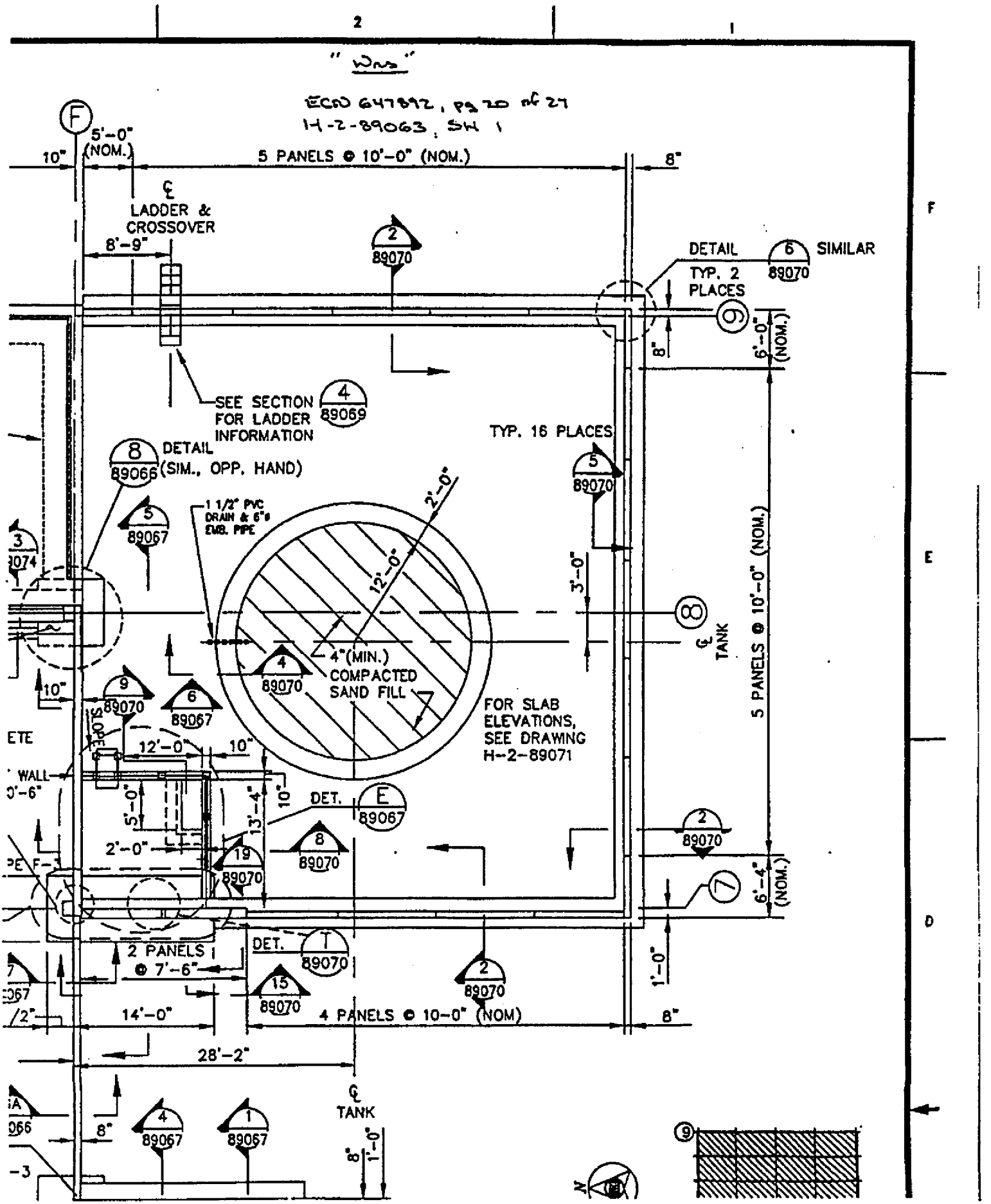
ECN 647892, Pg 18 of 27
H-2-89044, SH 1



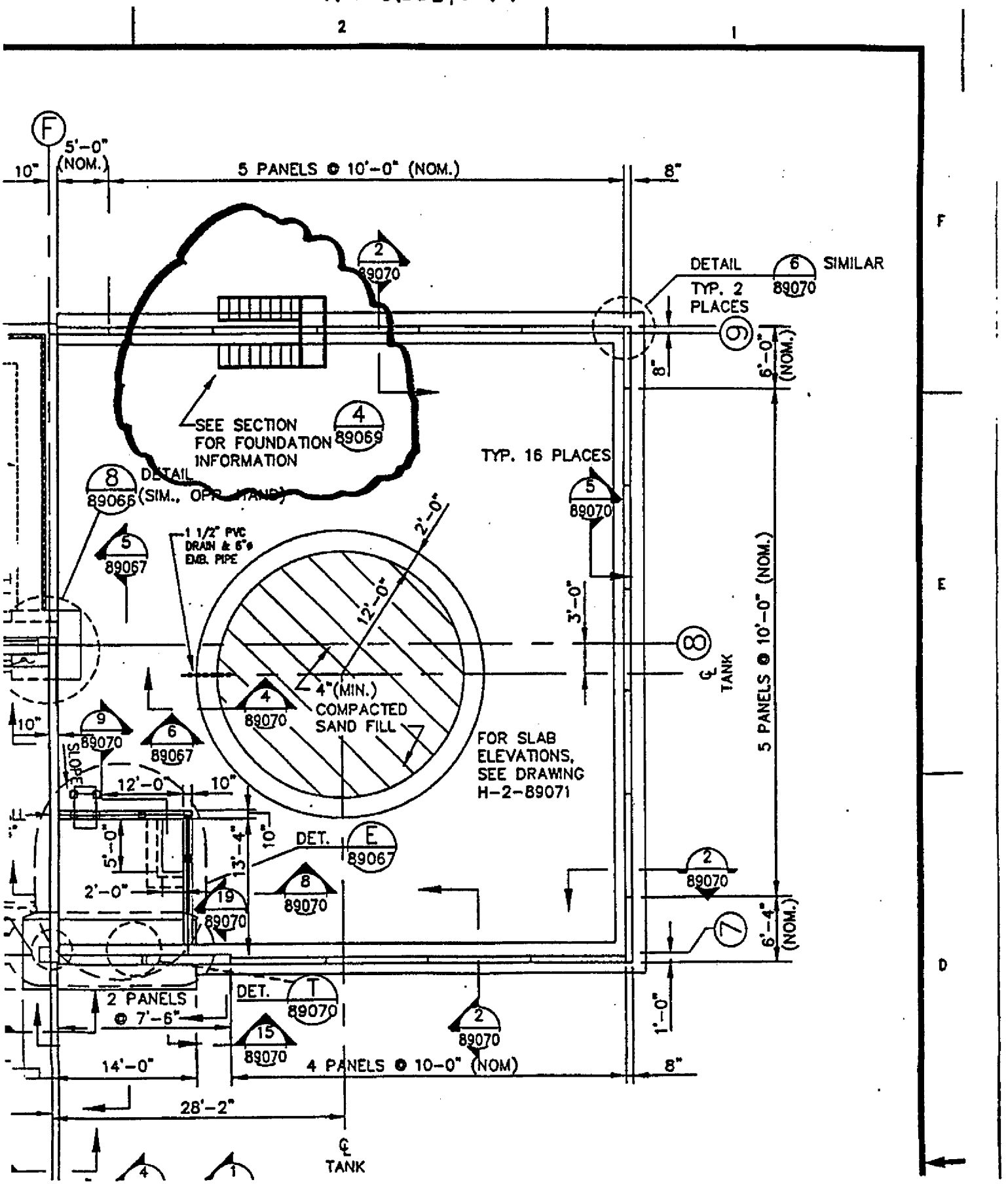
"I3"

ECO 647892, pg 19 of 27
H-2-89044, SH 1




2
1
" WDS "
ECO 647892, Pg 20 of 27
H-2-89063, SH 1
F
5'-0" (NOM.)
10"
5 PANELS @ 10'-0" (NOM.)
8"
℄ LADDER & CROSSOVER
8'-9"
SEE SECTION FOR LADDER INFORMATION
4 89069
2 89070
DETAIL 6 SIMILAR
TYP. 2 PLACES
9
8"
6'-0" (NOM.)
TYP. 16 PLACES
5 89070
8 DETAIL 89066 (SIM., OPP. HAND)
5 89067
1 1/2" PVC DRAIN & 6"ø EMB. PIPE
2'-0"
12'-0"
3'-0"
E
8
℄ TANK
4 89070
4"(MIN.) COMPACTED SAND FILL
FOR SLAB ELEVATIONS, SEE DRAWING H-2-89071
5 PANELS @ 10'-0" (NOM.)
9 89070
6 89067
10"
SLOPE
12'-0"
10"
WALL
5'-0"
13'-4"
10"
DET. E 89067
2'-0"
19 89070
8 89070
2 89070
7
6'-4" (NOM.)
D
2 PANELS @ 7'-6"
DET. T 89070
15 89070
2 89070
1'-0"
14'-0"
4 PANELS @ 10-0" (NOM)
8"
28'-2"
℄ TANK
4 89067
1 89067
8"
1'-0"
9
N

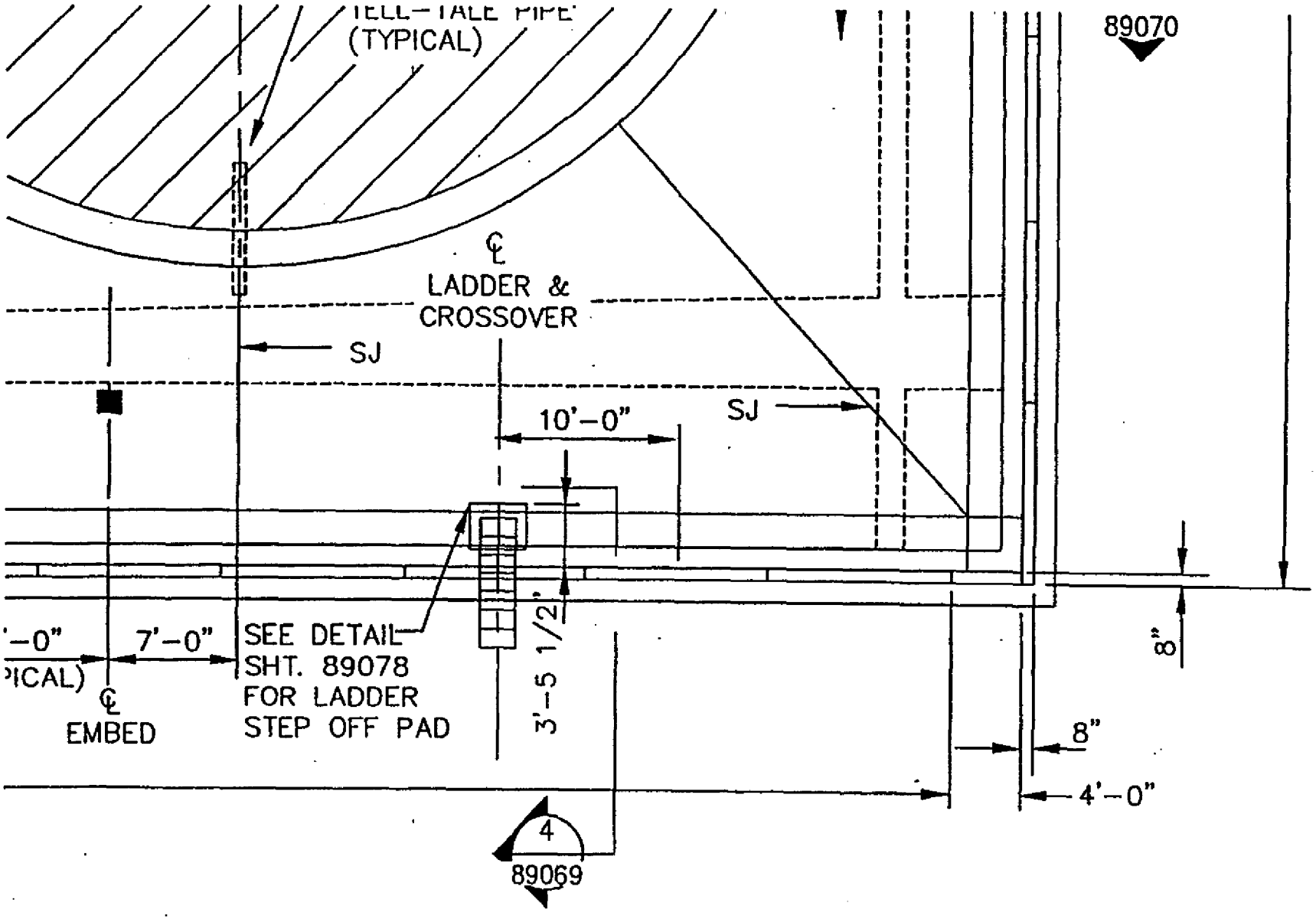
"I₃"
ECN 647892, Pg 21 of 27
H-2-89063, SH 1



"Was"

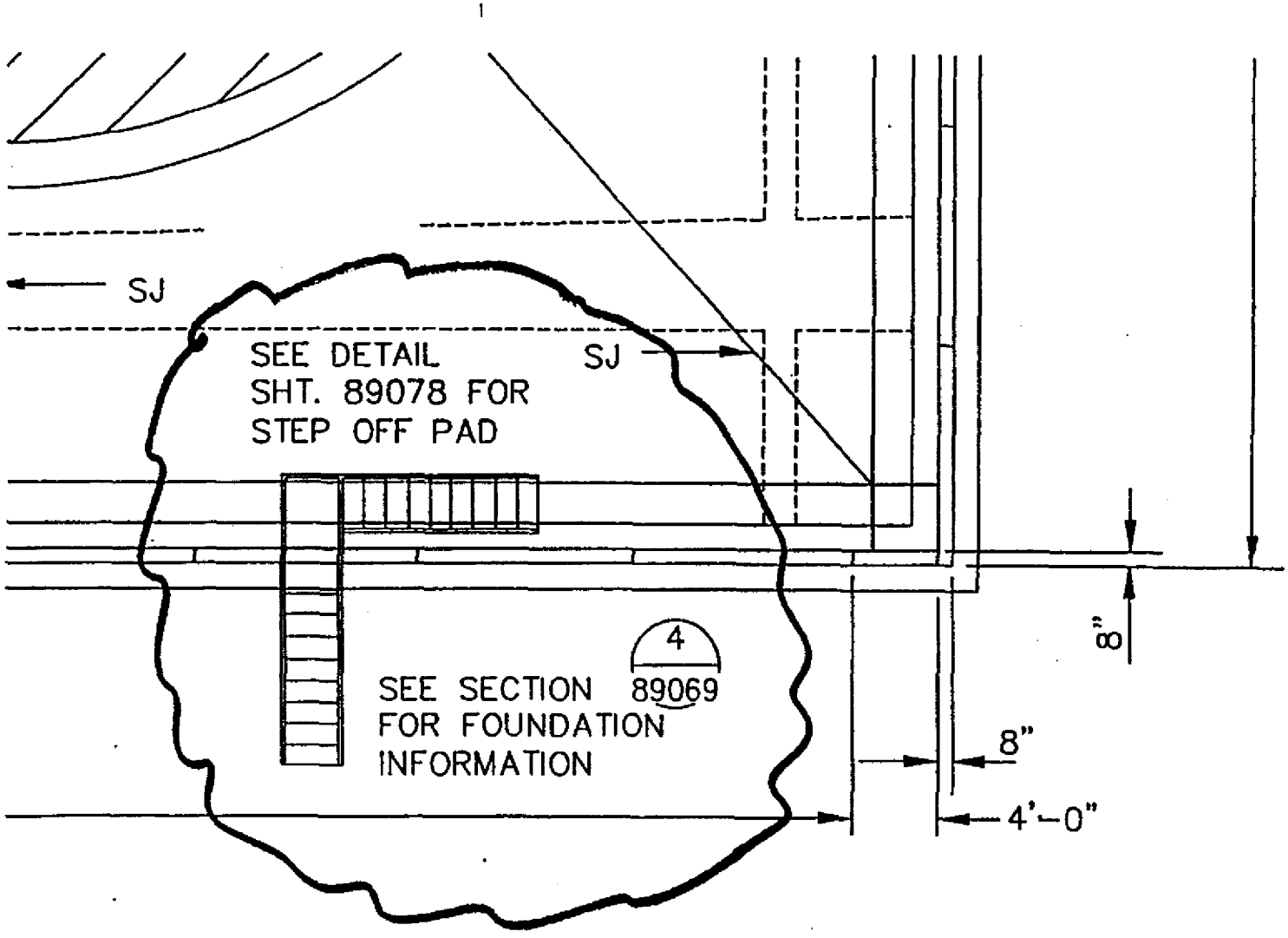
ECN 647892 : Pg 22 of 27

H-2-89068, SH 1



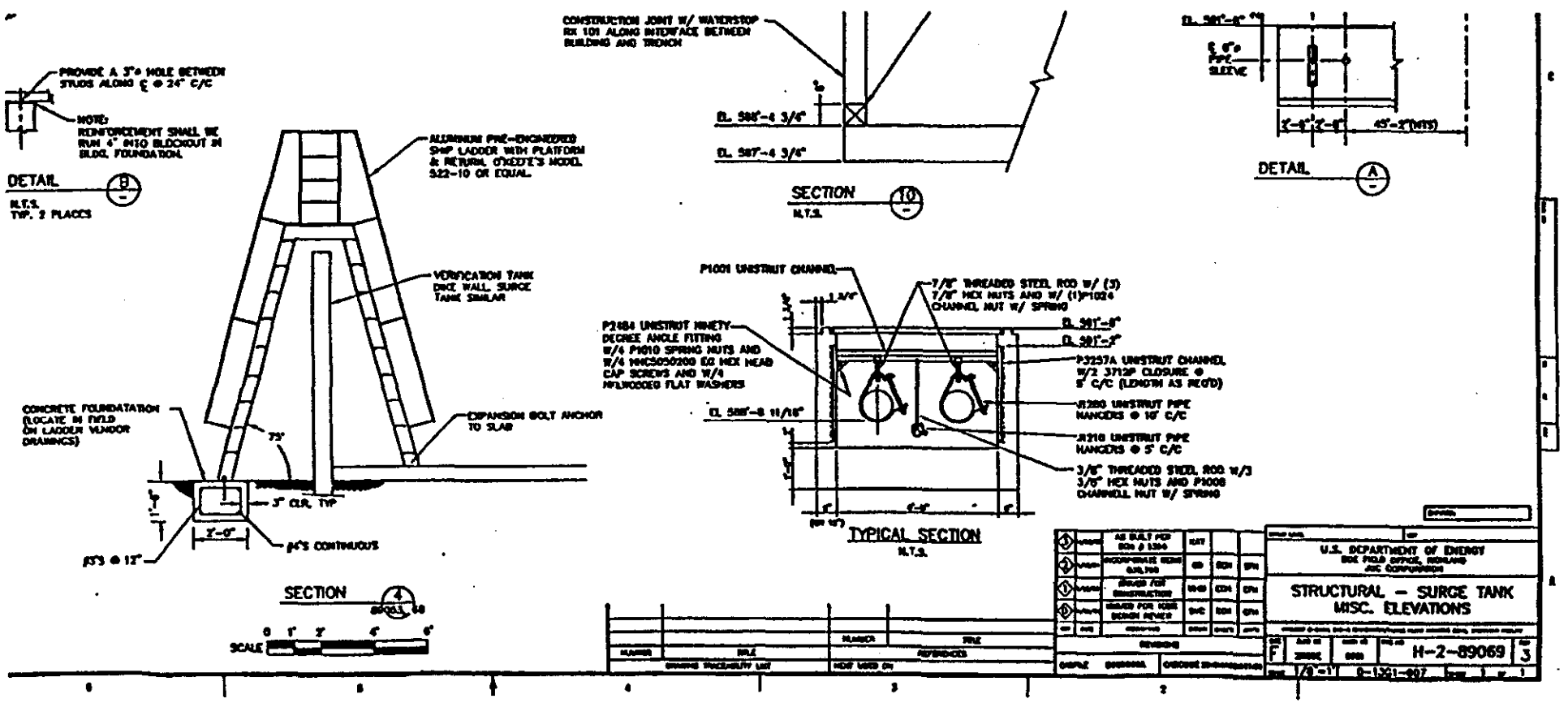
"Is"

ECN 647892, Pg 23 of 27
H-2-89068, SH 1



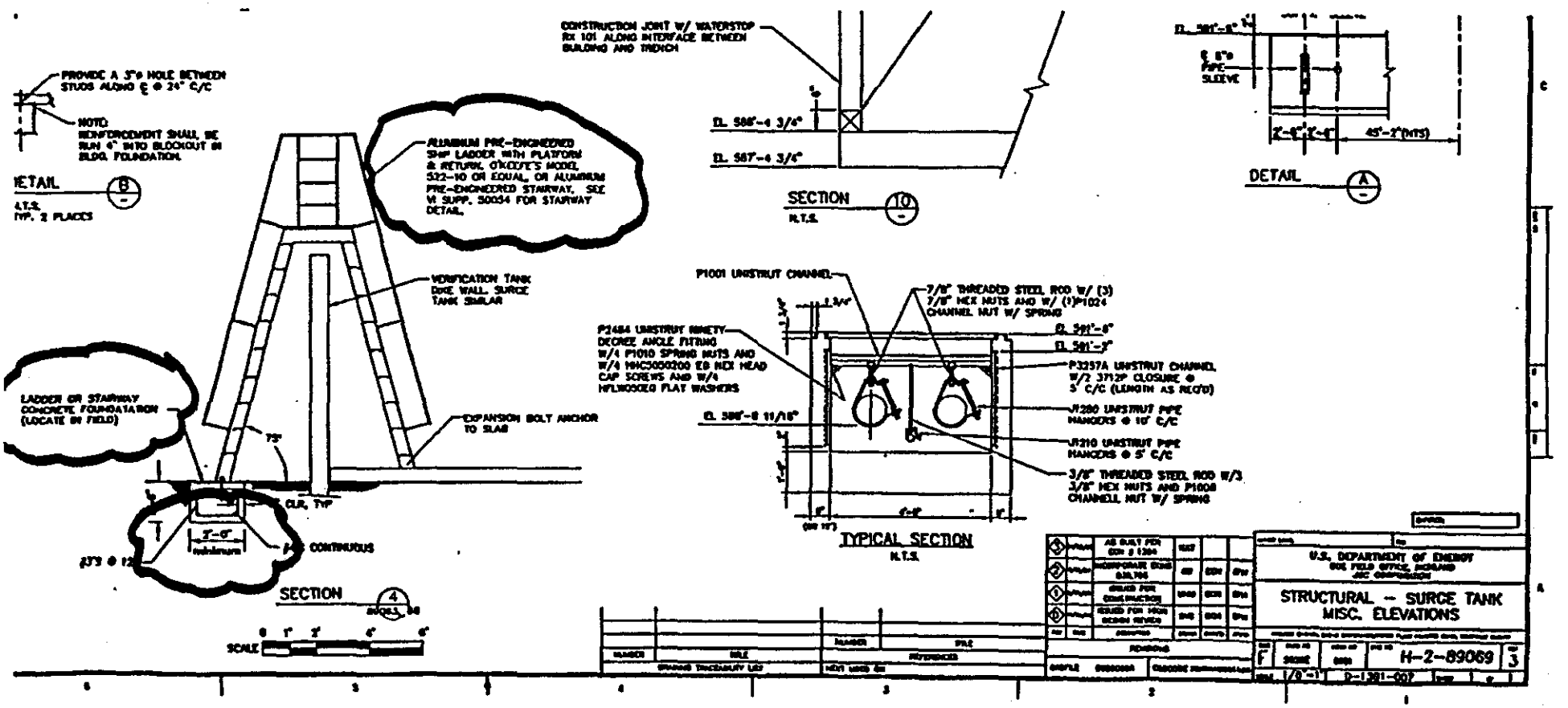
"Was"

ECN 647892, Pg 24 of 24
H-2-89069, SH 1



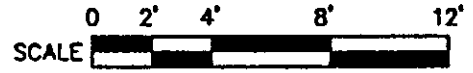
"I-3"

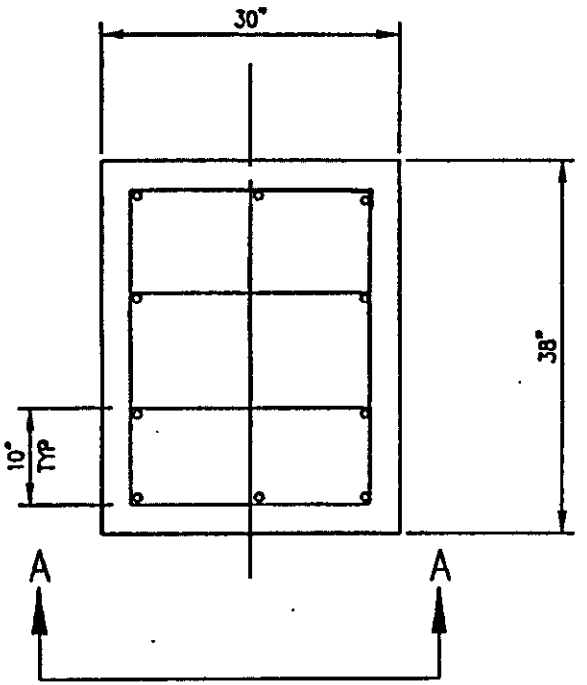
ECN 647892, pg 25 of 27
H-2-89069, SH 1

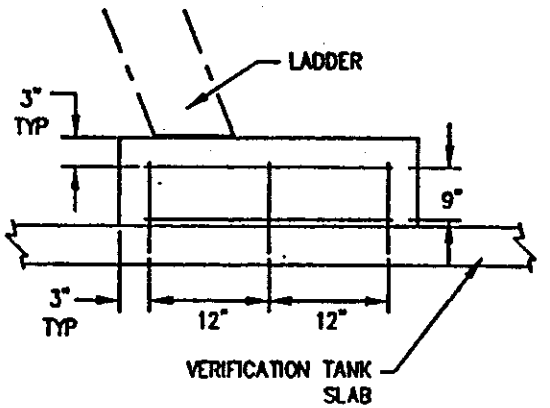


"was"

ECN 647892, Pg 26 of 27
14-2-89078, SH 1





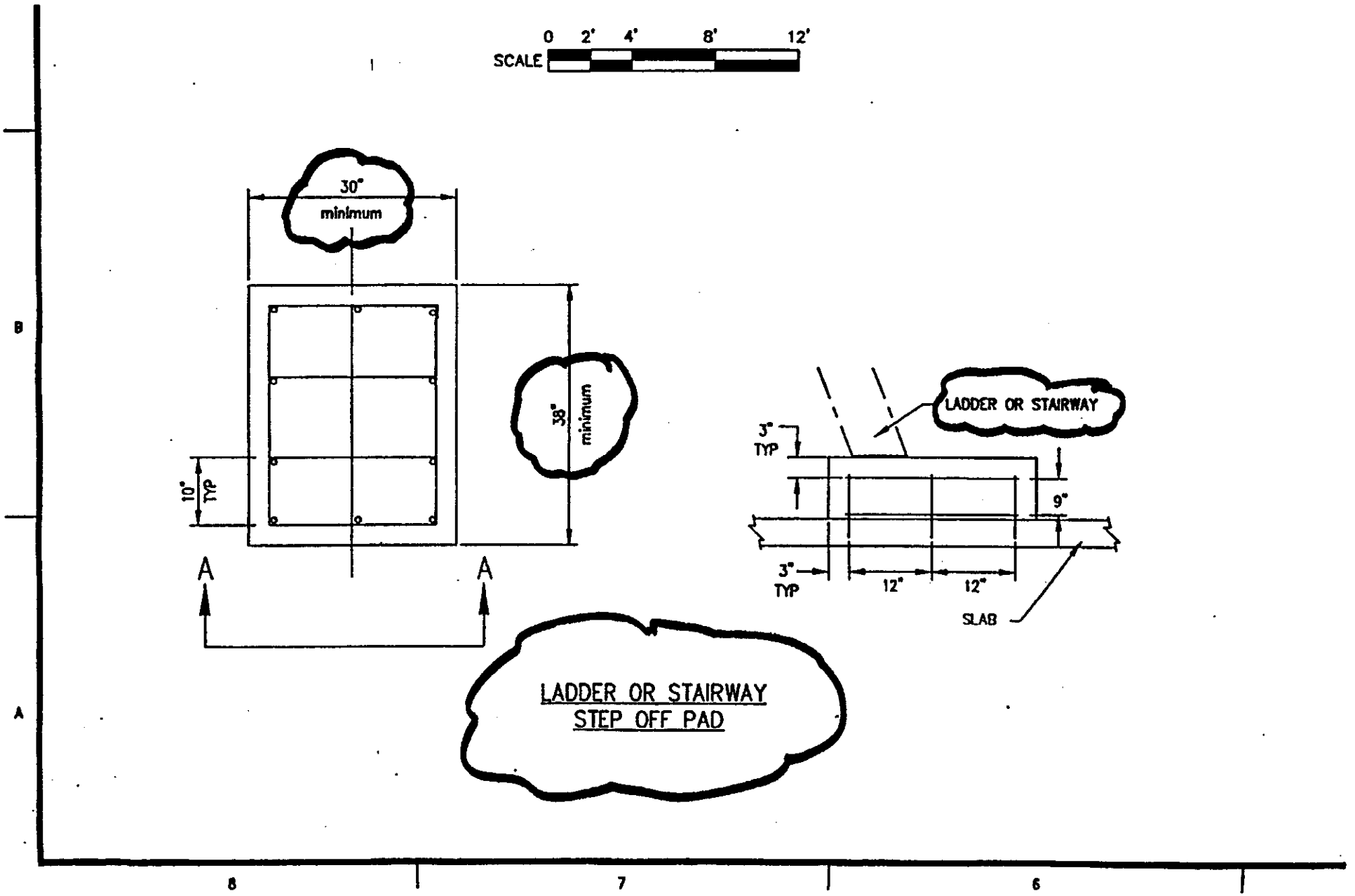


SHIP'S LADDER PLAN
VERIFICATION TANK

B
A
8
7
6

"Is"

ECN 647892, Pg 27 of 27
H-2-89078, SH 1



CPF 18

ENGINEERING CHANGE NOTICE

ESSENTIAL

Page 1 of 24

1. ECN 641703

Proj. ECN

2. ECN Category (mark one)	3. Originator's Name, Organization, MSIN, and Telephone No.	4. USQ Required?	5. Date
Supplemental [X] Direct Revision [] Change ECN [] Temporary [] Standby [] Supersedure [] Cancel/Void []	RN Wagner/32200/S6-71/376-4460	[] Yes [X] No	May 13, 1997
	6. Project Title/No./Work Order No. Misc. Mods and As-Builts for ETF Load-In Station	7. Bldg./Sys./Fac. No. 2025E/59A,60M/ 200 Area ETF	8. Approval Designator NA
	9. Document Numbers Changed by this ECN (includes sheet no. and rev.) See Block 13A	10. Related ECN No(s). N/A	11. Related PO No. NA

12a. Modification Work	12b. Work Package No.	12c. Modification Work Complete	12d. Restored to Original Condition (Temp. or Standby ECN only)
[X] Yes (fill out Blk. 12b) [] No (NA Blks. 12b, 12c, 12d)	EL-96-00208, EL-97-00343	Design Authority/Cog. Engineer Signature & Date	NA Design Authority/Cog. Engineer Signature & Date

13a. Description of Change 13b. Design Baseline Document? [X] Yes [] No

This ECN implements the following changes:

- Remove flow orifice in System 60M transfer line from Load-In Station.
- As-build sample valve and tanker vent valving.
- Add drain lines and valves to Load-In Station pump cases.
- Add bell-reducer funnels and valving to suction of Load-In Station pumps.
- Replace "Facility" with "Station" in all Load-In drawing titles.
- Identify status of Load-In Station drawings to Essential or Support.

Piping, fittings and jointing methods to meet the requirements of Hanford Site piping specification Class M-9. Install, inspect and test the new piping installation in accordance with ASME B31.3 and Addenda for Category D fluid service.

(Block 13a continued on Page 3)

14a. Justification (mark one)

Criteria Change	[]	Design Improvement	[X]	Environmental	[]	Facility Deactivation	[]
As-Found	[X]	Facilitate Const	[]	Const. Error/Omission	[]	Design Error/Omission	[]

14b. Justification Details

- Remove flow orifice in transfer line from Load-In Station to increase flow rate.
- As-build sample valve and tanker vent valving for configuration control.
- Add drain lines and valves to Load-In Station pump cases for improved contamination control.
- Add bell-reducer funnels and valving to allow priming of Load-In Station pumps.
- Replace "Facility" with "Station" in drawing titles to reflect the status of the Load-In Station as part of the 200 Area ETF, rather than a stand-alone facility.
- Identify status of Load-In Station drawings to Essential or Support, as appropriate.

15. Distribution (include name, MSIN, and no. of copies)

N. J. Sullivan	S6-72	1	R. J. Nicklas	S6-72	1
J. E. Geary	S6-71	2	A. K. Yoskum	S6-71	1
R. N. Wagner*	S6-71	2	S. P. Biglin*	S6-74	1
C. M. Towne	S6-74	1	E. A. McNamer*	S6-74	1
J. L. Vigue	S6-74	1	B. S. Darling	S6-72	1
J. F. Berger	S6-74	1	D. P. Nelsen	S6-71	1
T. W. Dallas	S6-71	1	Stations 3/4/5/15/16/30		

(* Advance Copies)

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DATE MAY 27 1997

STA: 30 HANFORD RELEASE ID: 25

A-7900-013-2 (05/96) GEF095

ENGINEERING CHANGE NOTICE	Page 2 of 24	1. ECN (use no. from pg. 1) 641703

16. Design Verification Required	17. Cost Impact		18. Schedule Impact (days)
[X] Yes	ENGINEERING NA	CONSTRUCTION	NA
[ ] No	Additional [ ] $	Additional [ ] $	Improvement [ ]
	Savings [ ] $	Savings [ ] $	Delay [ ]

19. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 13. Enter the affected document number in Block 20.

SDD/DD	[ ]	Seismic/Stress Analysis	[ ]	Tank Calibration Manual	[ ]
Functional Design Criteria	[ ]	Stress/Design Report	[ ]	Health Physics Procedure	[ ]
Operating Specification	[ ]	Interface Control Drawing	[ ]	Spares Multiple Unit Listing	[ ]
Criticality Specification	[ ]	Calibration Procedure	[ ]	Test Procedures/Specification	[ ]
Conceptual Design Report	[ ]	Installation Procedure	[ ]	Component Index	[X]
Equipment Spec.	[ ]	Maintenance Procedure	[ ]	ASME Coded Item	[ ]
Const. Spec.	[ ]	Engineering Procedure	[ ]	Human Factor Consideration	[ ]
Procurement Spec.	[ ]	Operating Instruction	[ ]	Computer Software	[ ]
Vendor Information	[X]	Operating Procedure	[ ]	Electric Circuit Schedule	[ ]
OM Manual	[ ]	Operational Safety Requirement	[ ]	ICRS Procedure	[ ]
FSAR/SAR	[ ]	IEFD Drawing	[ ]	Process Control Manual/Plan	[ ]
Safety Equipment List	[ ]	Cell Arrangement Drawing	[ ]	Process Flow Chart	[ ]
Radiation Work Permit	[ ]	Essential Material Specification	[ ]	Purchase Requisition	[ ]
Environmental Impact Statement	[ ]	Fac. Proc. Samp. Schedule	[ ]	Tickler File	[ ]
Environmental Report	[ ]	Inspection Plan	[ ]		[ ]
Environmental Permit	[ ]	Inventory Adjustment Request	[ ]		[ ]

20. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

Document Number/Revision	Document Number/Revision	Document Number Revision
JCS Database (Component Index)		

21. Approvals

	Signature	Date
Design Authority - R. N. Wagner		5/23/97
Cog. Eng. - R. N. Wagner		5/22/97
Cog. Mgr. - R. J. Nicklas	for	5-23-97
QA		
Safety		
Environ.		
Other		

	Signature	Date
Design Agent		
PE		
QA		
Safety		
Design		
Environ.		
Other		

DEPARTMENT OF ENERGY

Signature or a Control Number that tracks the Approval Signature

ADDITIONAL

ENGINEERING CHANGE NOTICE CONTINUATION SHEET	ECN 641703
Page 3 of 24	Date 5/13/97

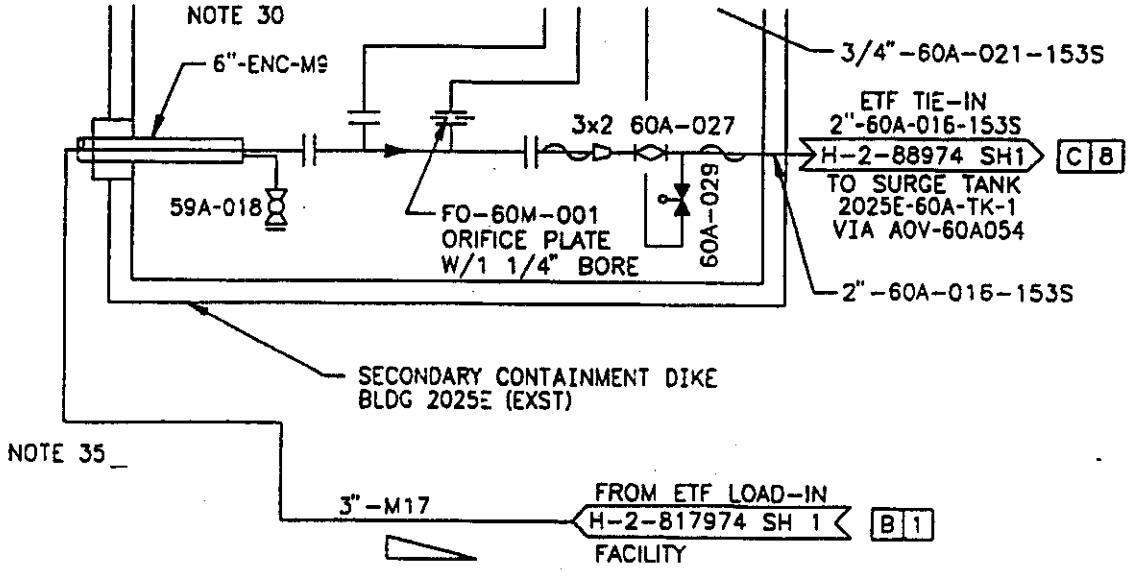
Documents changed by this ECN (also see attached drawing changes):

H-2-88766, Sheet 4, Rev. 2
H-2-88779, Sheet 4, Rev. 0
H-9-203, Sheet 1, Rev. 0
H-9-203, Sheet 4, Rev. 0
H-2-817968, Sheet 1, Rev. 1*
H-2-817969, Sheet 1, Rev. 1*
H-2-817969, Sheet 2, Rev. 1*
H-2-817969, Sheet 3, Rev. 1*
H-2-817969, Sheet 4, Rev. 1*
H-2-817969, Sheet 5, Rev. 1*
H-2-817970, Sheet 1, Rev. 1*
H-2-817970, Sheet 2, Rev. 1*
H-2-817971, Sheet 1, Rev. 1*
H-2-817971, Sheet 2, Rev. 1*
H-2-817972, Sheet 1, Rev. 1*
H-2-817973, Sheet 1, Rev. 1*
H-2-817974, Sheet 1, Rev. 2*
H-2-817975, Sheet 1, Rev. 1*
H-2-817976, Sheet 1, Rev. 1*
H-2-817977, Sheet 1, Rev. 1*
H-2-817978, Sheet 1, Rev. 1*
H-2-817980, Sheet 1, Rev. 1*
H-2-817981, Sheet 1, Rev. 1*
H-2-817981, Sheet 2, Rev. 1*
H-2-817981, Sheet 3, Rev. 1*
H-2-817981, Sheet 4, Rev. 1*
H-2-817981, Sheet 5, Rev. 1*
H-2-817983, Sheet 1, Rev. 0*
H-2-817983, Sheet 2, Rev. 1*
H-2-817983, Sheet 3, Rev. 0*
H-2-817983, Sheet 4, Rev. 1*
H-2-817983, Sheet 5, Rev. 0*
H-2-817983, Sheet 6, Rev. 1*
H-2-817983, Sheet 7, Rev. 0*
H-2-817983, Sheet 8, Rev. 0*
H-2-817985, Sheet 1, Rev. 1*
H-2-817985, Sheet 2, Rev. 1*
H-2-817987, Sheet 1, Rev. 1*
H-2-817987, Sheet 3, Rev. 1*
H-2-817987, Sheet 4, Rev. 1*
H-2-817988, Sheet 1, Rev. 1*
H-2-817988, Sheet 2, Rev. 1*
H-2-817988, Sheet 3, Rev. 1*
H-2-817989, Sheet 1, Rev. 1*
H-2-817990, Sheet 1, Rev. 1*
H-2-817991, Sheet 2, Rev. 1*

(* Title and/or Essential/Support status is changed for these drawings per this ECN.)

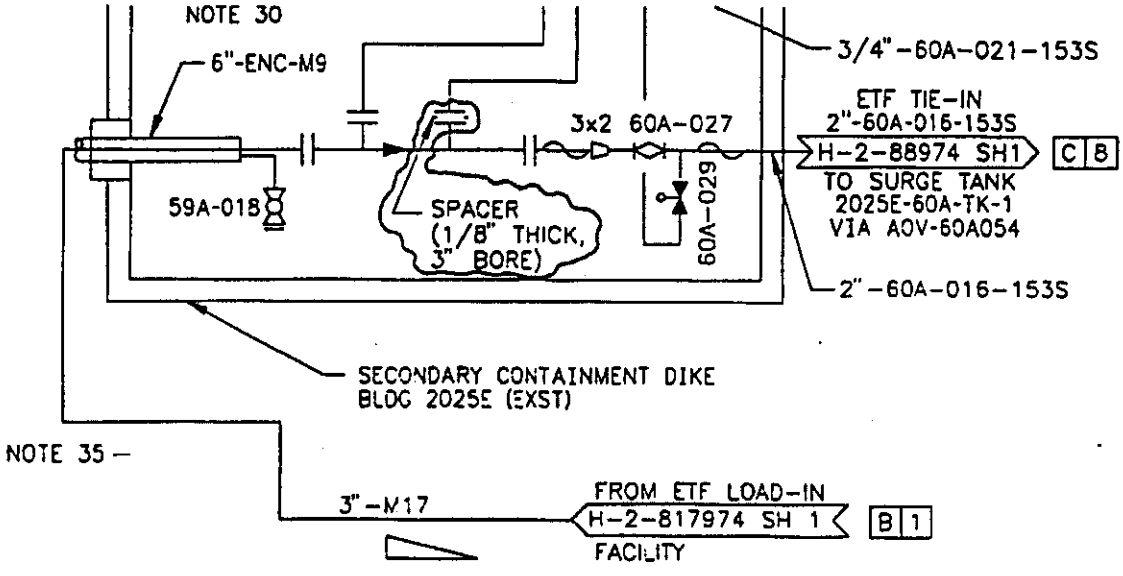
H-2-88766, Sheet 4, Rev. 2, Zone D-2

IS:



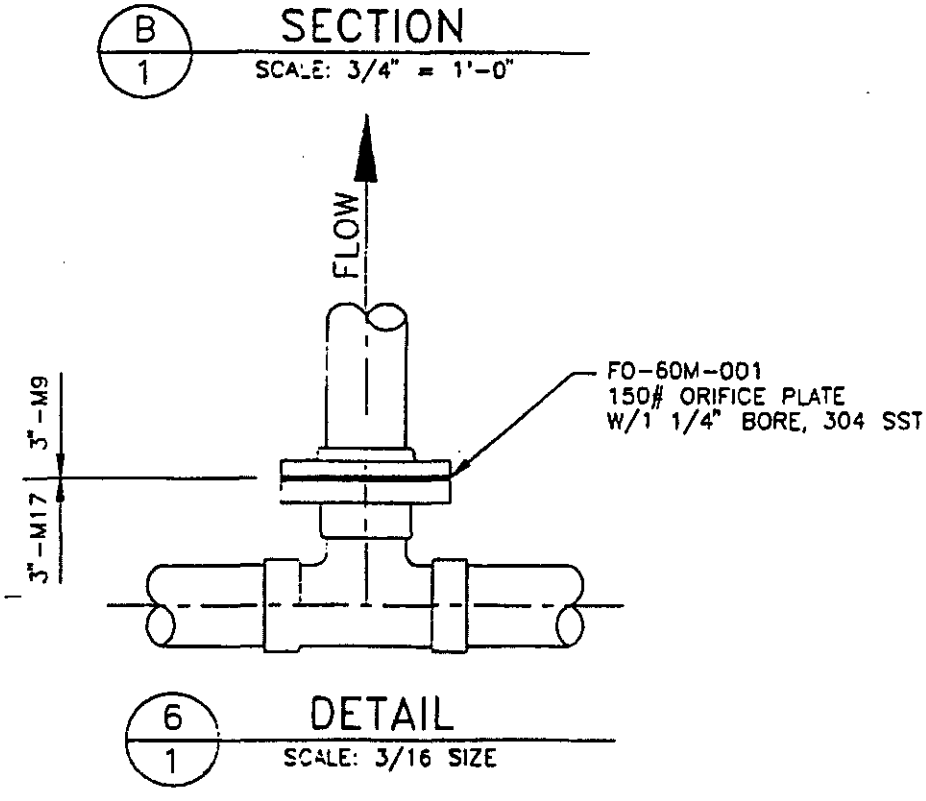
H-2-88766, Sheet 4, Rev. 2, Zone D-2

CHANGE TO:



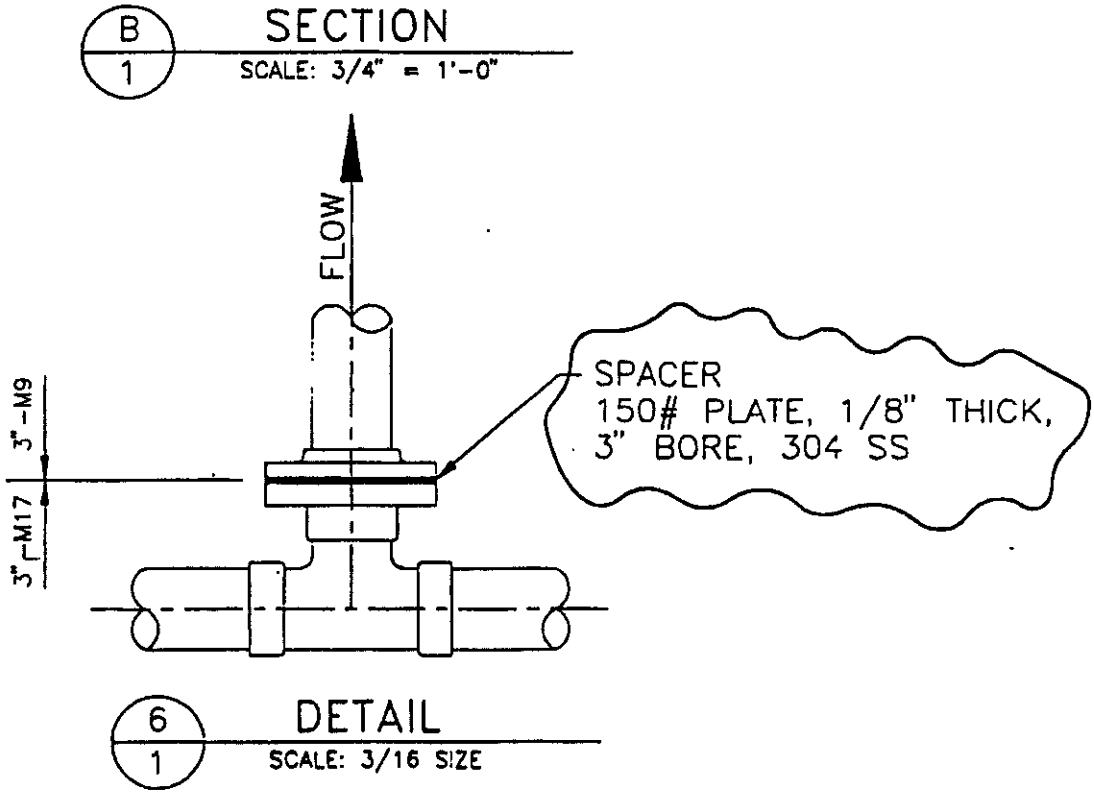
H-2-88779, Sheet 4, Rev. 0, Zone B-2

IS:



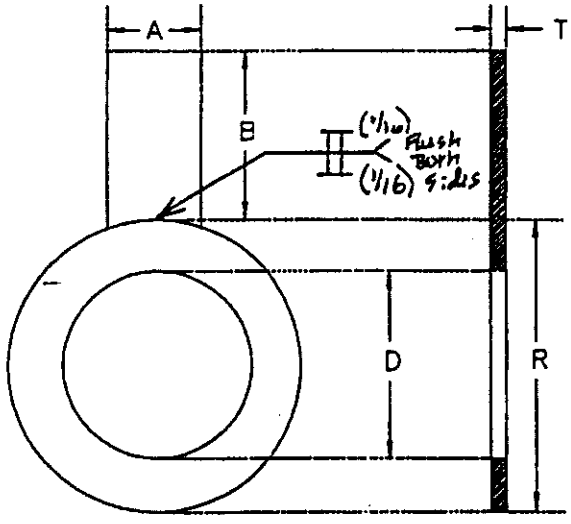
H-2-88779, Sheet 4, Rev. 0, Zone B-2

CHANGE TO:



Sketch for 3" spacer shown in above changes to H-2-88779 and H-2-88766

3" FLANGE SPACER FOR ECN 641703



T = 1/8" PLATE THICKNESS

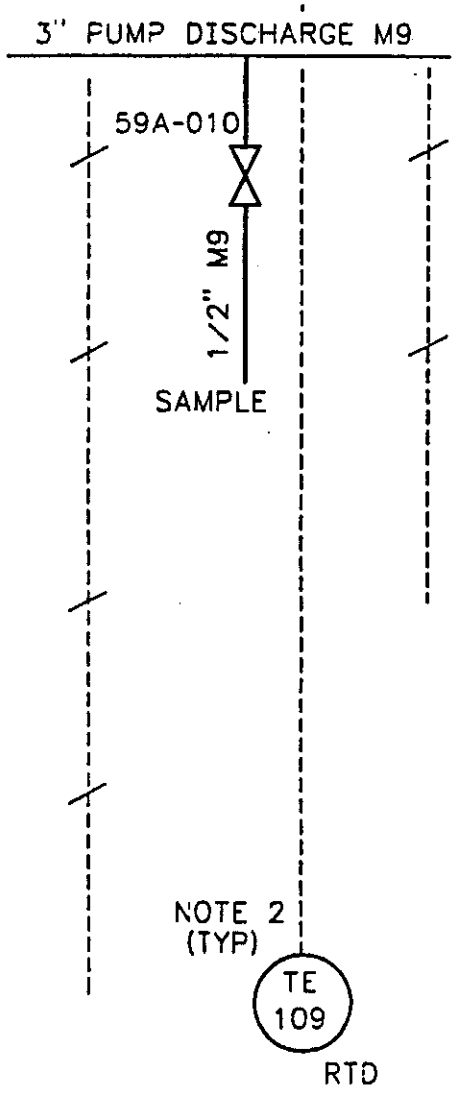
A = 2" (APPROX)
B = 3" (APPROX)

D = 3.00" +/- .05"
R = 5.25" +/- .05"

MATERIAL = 304SS
FLANGE CLASS = 150 LB

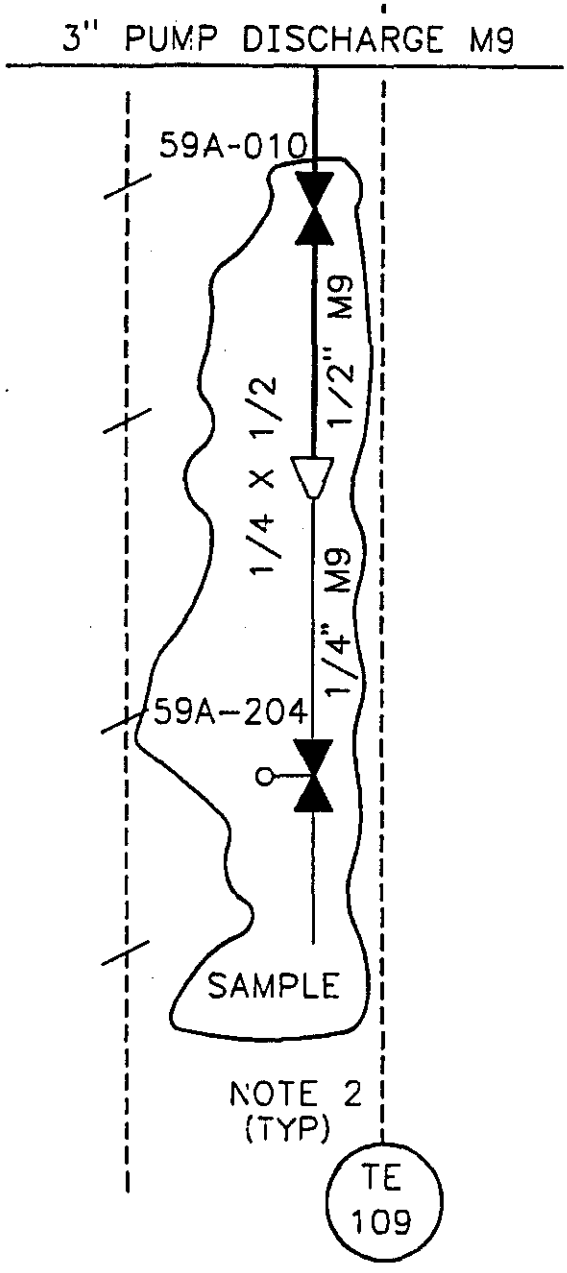
H-2-817974, Sheet 1, Rev. 2, Zone C-5

IS:



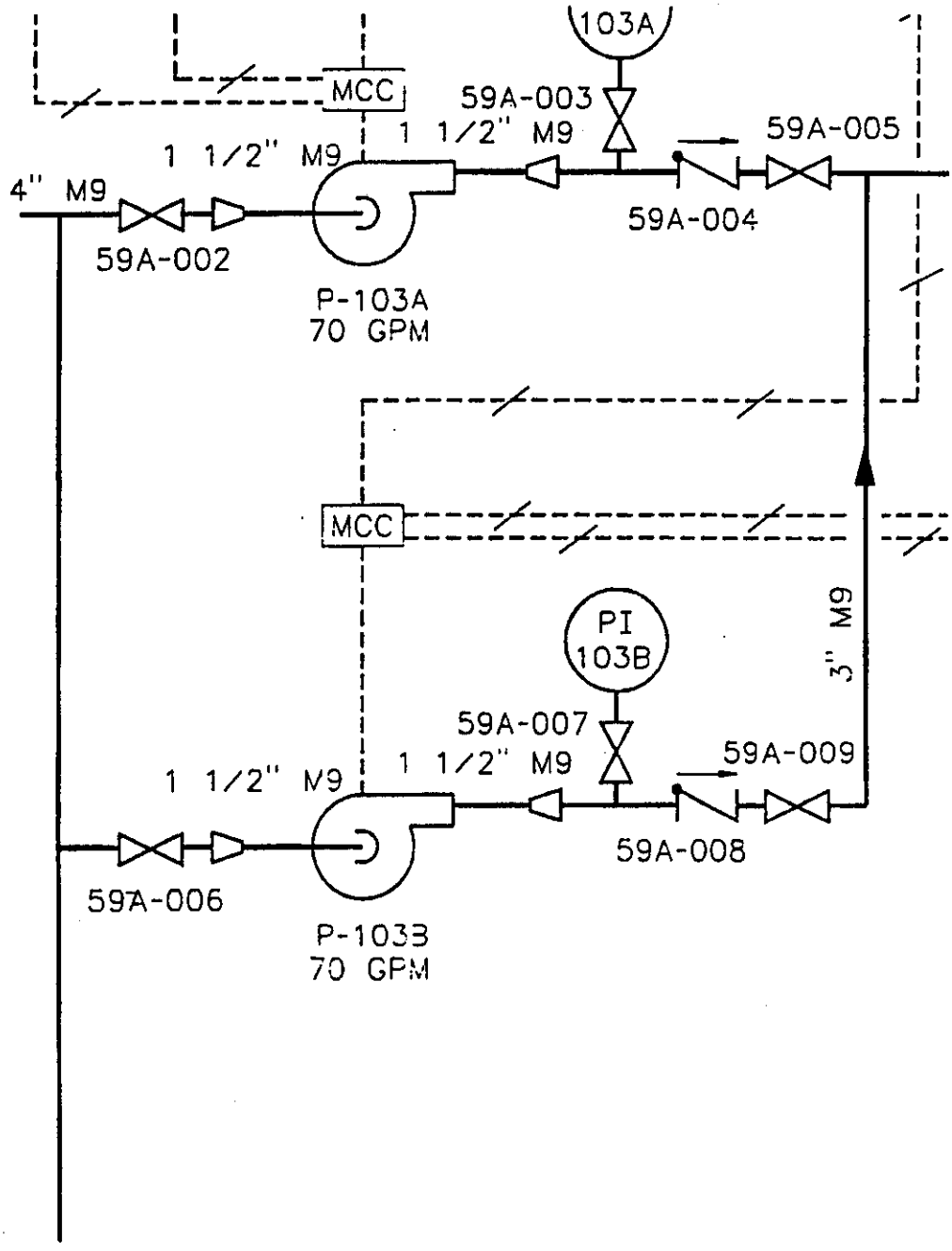
H-2-817974, Sheet 1, Rev. 2, Zone C-5

CHANGE TO:



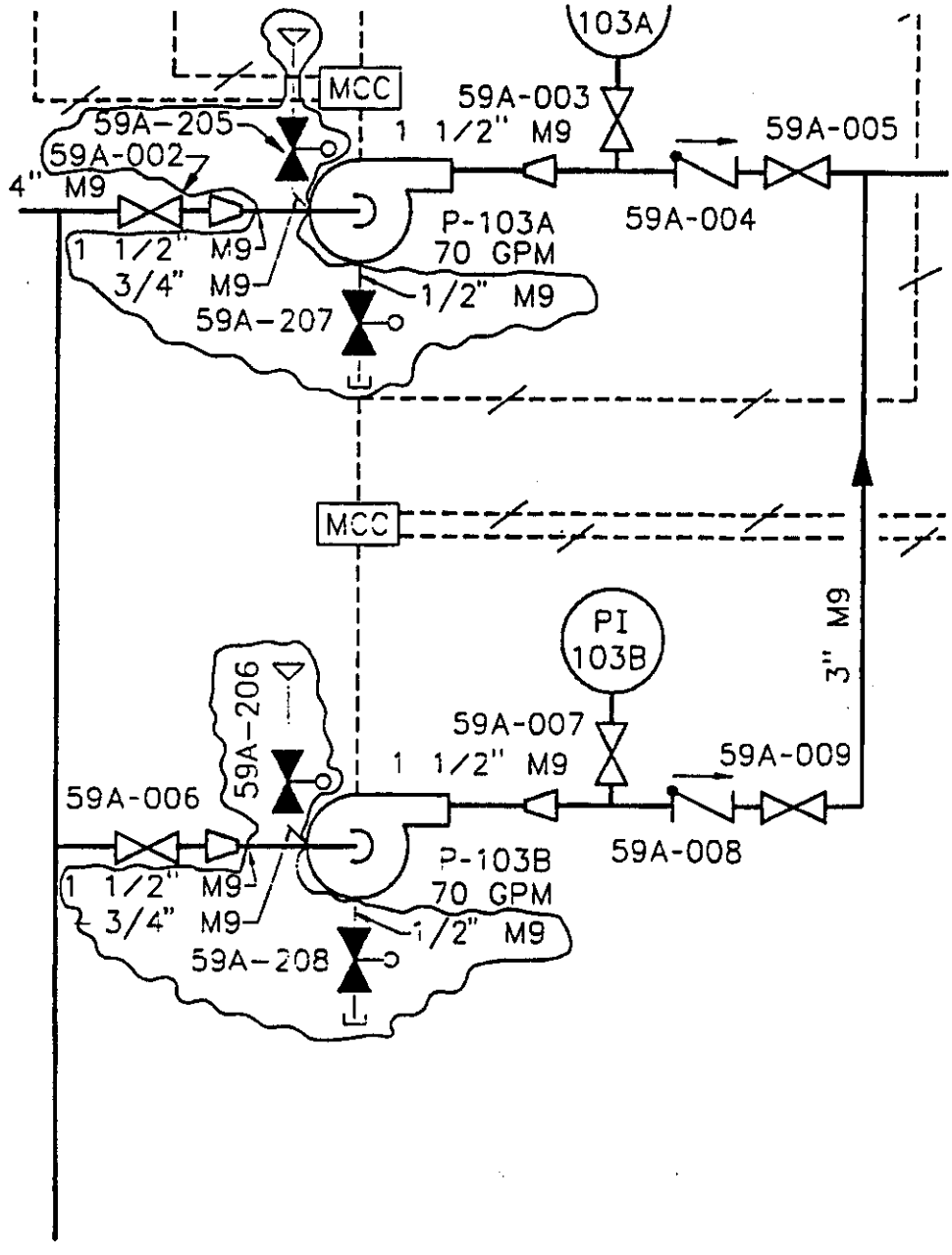
H-2-817974, Sheet 1, Rev. 2, Zone C-7 to D-7

IS:



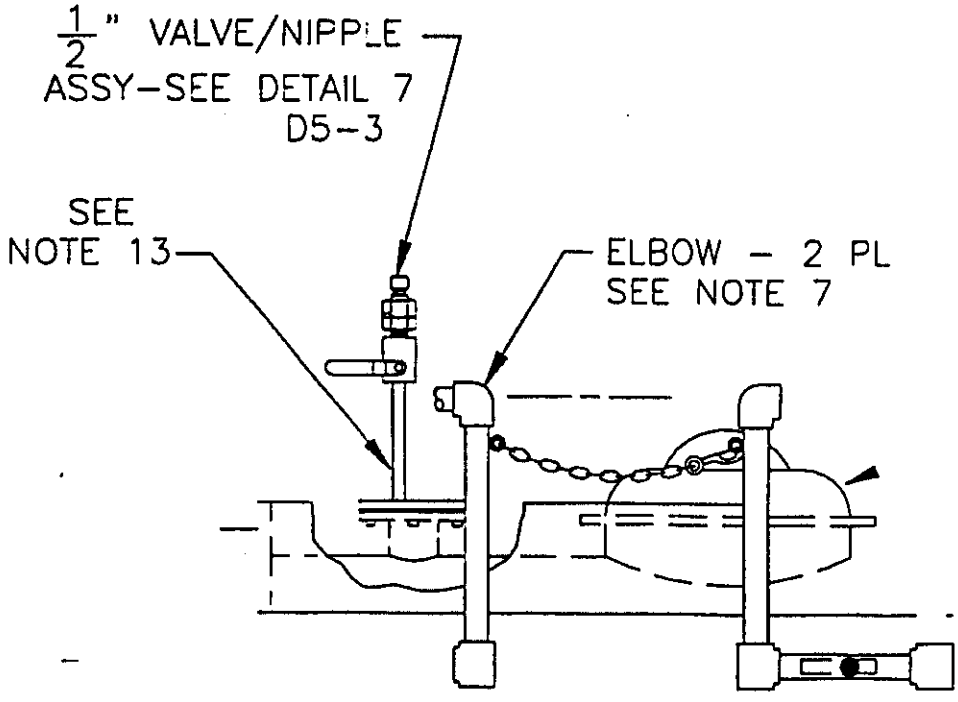
H-2-817974, Sheet 1, Rev. 2, Zone C-7 to D-7

CHANGE TO:



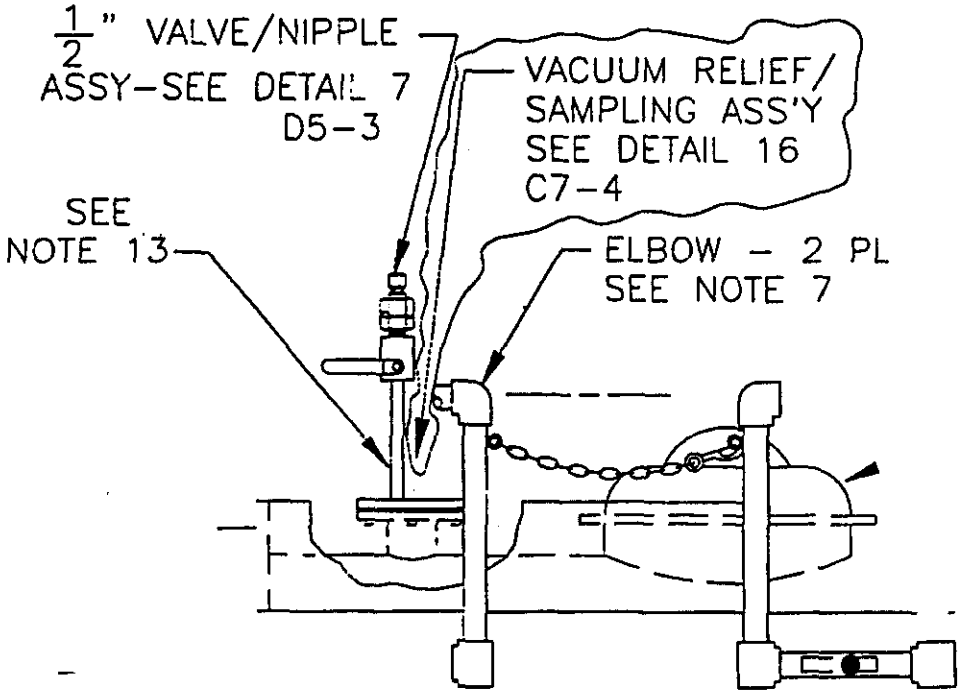
H-9-203, Sheet 1, Rev. 0, Zone E-6

IS:



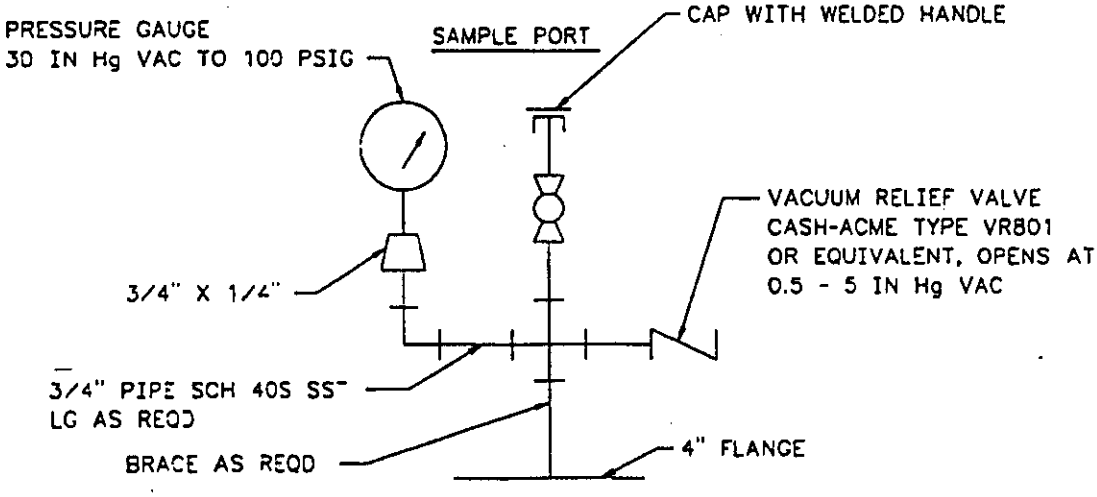
H-9-203, Sheet 1, Rev. 0, Zone E-6

CHANGE TO:



H-9-203, Sheet 4, Rev. 0, Zone D-7.

IS:

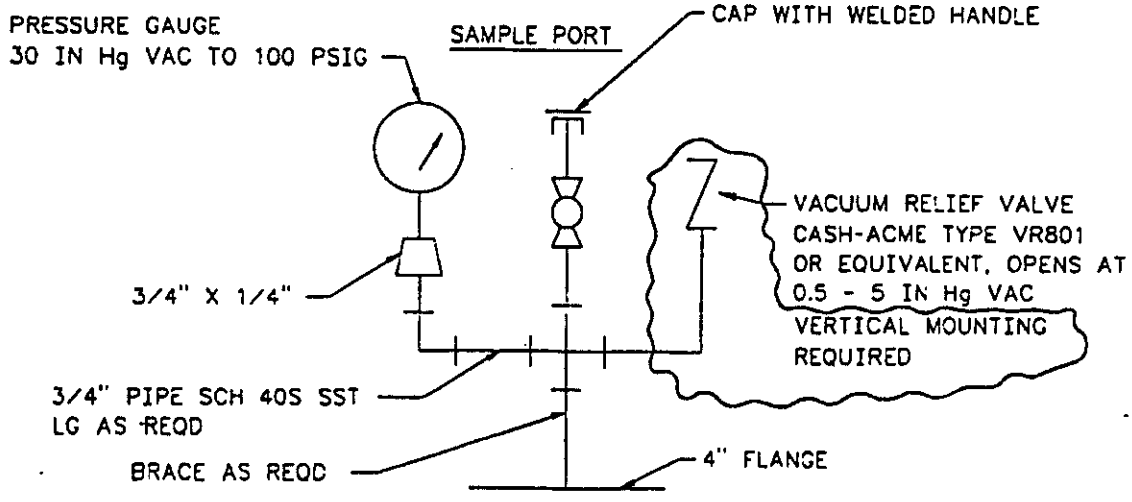


DETAIL 16 C6-2

SCALE: NONE

H-9-203, Sheet 4, Rev. 0, Zone D-7

CHANGE TO:



DETAIL 16 C6-2, E6-1

SCALE: NONE

H-2-817968, Sheet 1, Rev. 1, Title

IS: ETF TRUCK LOAD-IN FACILITY LOCATION PLAN & DWG LIST

CHANGE TO: ETF TRUCK LOAD-IN STATION LOCATION PLAN & DWG LIST

Drawing Status: ESSENTIAL

H-2-817969, Sheet 1, Rev. 1, Title

IS: CIVIL ETF TRUCK LOAD-IN FACILITY SITE PLAN

CHANGE TO: CIVIL ETF TRUCK LOAD-IN STATION SITE PLAN

Drawing Status: SUPPORT

H-2-817969, Sheet 2, Rev. 1, Title

IS: CIVIL ETF TRUCK LOAD-IN FACILITY PLAN AND PROFILES

CHANGE TO: CIVIL ETF TRUCK LOAD-IN STATION PLAN AND PROFILES

Drawing Status: SUPPORT

H-2-817969, Sheet 3, Rev. 1, Title

IS: CIVIL ETF TRUCK LOAD-IN FACILITY ENLARGED PLAN

CHANGE TO: CIVIL ETF TRUCK LOAD-IN STATION ENLARGED PLAN

Drawing Status: SUPPORT

H-2-817969, Sheet 4, Rev. 1, Title

IS: CIVIL ETF TRUCK LOAD-IN FACILITY MISCELLANEOUS DETAILS

CHANGE TO: CIVIL ETF TRUCK LOAD-IN STATION MISCELLANEOUS DETAILS

Drawing Status: SUPPORT

H-2-817969, Sheet 5, Rev. 1, Title

IS: CIVIL ETF TRUCK LOAD-IN FACILITY MISCELLANEOUS DETAILS

CHANGE TO: CIVIL ETF TRUCK LOAD-IN STATION MISCELLANEOUS DETAILS

Drawing Status: SUPPORT

H-2-817970, Sheet 1, Rev. 1, Title

IS: STRUCTURAL ETF TRUCK LOAD-IN FACILITY PLAN AND SECTIONS

CHANGE TO: STRUCTURAL ETF TRUCK LOAD-IN STATION PLAN AND SECTIONS

Drawing Status: SUPPORT

H-2-817970, Sheet 2, Rev. 1, Title

IS: STRUCTURAL ETF TRUCK LOAD-IN FACILITY SECTIONS AND DETAILS

CHANGE TO: STRUCTURAL ETF TRUCK LOAD-IN STATION SECTIONS AND DETAILS

Drawing Status: SUPPORT

H-2-817971, Sheet 1, Rev. 1, Title

IS: STRUCTURAL ETF TRUCK LOAD-IN FACILITY STEEL PLAN & SECTIONS

CHANGE TO: STRUCTURAL ETF TRUCK LOAD-IN STATION STEEL PLAN & SECTIONS

Drawing Status: SUPPORT

H-2-817971, Sheet 2, Rev. 1, Title

IS: STRUCTURAL ETF TRUCK LOAD-IN FACILITY STEEL DETAILS

CHANGE TO: STRUCTURAL ETF TRUCK LOAD-IN STATION STEEL DETAILS

Drawing Status: SUPPORT

H-2-817972, Sheet 1, Rev. 1, Title

IS: STRUCTURAL ETF TRUCK LOAD-IN FACILITY SECTIONS AND DETAILS

CHANGE TO: STRUCTURAL ETF TRUCK LOAD-IN STATION SECTIONS AND DETAILS

Drawing Status: SUPPORT

H-2-817973, Sheet 1, Rev. 1, Title

IS: STRUCTURAL ETF TRUCK LOAD-IN FACILITY MISC SECTIONS AND DETAILS

CHANGE TO: STRUCTURAL ETF TRUCK LOAD-IN STATION MISC SECTIONS AND DETAILS

Drawing Status: SUPPORT

H-2-817974, Sheet 1, Rev. 2, Title

IS: P & ID ETF TRUCK LOAD-IN FACILITY

CHANGE TO: P & ID ETF TRUCK LOAD-IN STATION

Drawing Status: ESSENTIAL

H-2-817975, Sheet 1, Rev. 1, Title

IS: PIPING ETF TRUCK LOAD-IN FACILITY PLAN

CHANGE TO: PIPING ETF TRUCK LOAD-IN STATION PLAN

Drawing Status: ESSENTIAL

H-2-817976, Sheet 1, Rev. 1, Title

IS: PIPING ETF TRUCK LOAD-IN FACILITY SECTIONS AND DETAILS

CHANGE TO: PIPING ETF TRUCK LOAD-IN STATION SECTIONS AND DETAILS

Drawing Status: SUPPORT

H-2-817977, Sheet 1, Rev. 1, Title

IS: PIPING ETF TRUCK LOAD-IN FACILITY DETAILS

CHANGE TO: PIPING ETF TRUCK LOAD-IN STATION DETAILS

Drawing Status: SUPPORT

H-2-817978, Sheet 1, Rev. 1, Title

IS: PIPING ETF TRUCK LOAD-IN FACILITY PIPE SUPPORTS

CHANGE TO: PIPING ETF TRUCK LOAD-IN STATION PIPE SUPPORTS

Drawing Status: SUPPORT

H-2-817980, Sheet 1, Rev. 1, Title

IS: INSTRUMENTATION ETF TRUCK LOAD-IN FACILITY LEGEND & SYMBOLS

CHANGE TO: INSTRUMENTATION ETF TRUCK LOAD-IN STATION LEGEND & SYMBOLS

Drawing Status: SUPPORT

H-2-817981, Sheet 1, Rev. 1, Title

IS: INSTRUMENTATION ETF TRUCK LOAD-IN FACILITY LOOP DIAGRAM

CHANGE TO: INSTRUMENTATION ETF TRUCK LOAD-IN STATION LOOP DIAGRAM

Drawing Status: SUPPORT

H-2-817981, Sheet 2, Rev. 1, Title

IS: INSTRUMENTATION ETF TRUCK LOAD-IN FACILITY LOOP DIAGRAM

CHANGE TO: INSTRUMENTATION ETF TRUCK LOAD-IN STATION LOOP DIAGRAM

Drawing Status: SUPPORT

H-2-817981, Sheet 3, Rev. 1, Title

IS: INSTRUMENTATION ETF TRUCK LOAD-IN FACILITY LOOP DIAGRAM

CHANGE TO: INSTRUMENTATION ETF TRUCK LOAD-IN STATION LOOP DIAGRAM

Drawing Status: SUPPORT

H-2-817981, Sheet 4, Rev. 1, Title

IS: INSTRUMENTATION ETF TRUCK LOAD-IN FACILITY LOOP DIAGRAM

CHANGE TO: INSTRUMENTATION ETF TRUCK LOAD-IN STATION LOOP DIAGRAM

Drawing Status: SUPPORT

H-2-817981, Sheet 5, Rev. 1, Title

IS: INSTRUMENTATION ETF TRUCK LOAD-IN FACILITY LOOP DIAGRAM

CHANGE TO: INSTRUMENTATION ETF TRUCK LOAD-IN STATION LOOP DIAGRAM

Drawing Status: SUPPORT

H-2-817983, Sheet 1, Rev. 0, Title

CHANGE TO: Drawing Status: SUPPORT

H-2-817983, Sheet 2, Rev. 1, Title

CHANGE TO: Drawing Status: SUPPORT

H-2-817983, Sheet 3, Rev. 0, Title

CHANGE TO: Drawing Status: SUPPORT

H-2-817983, Sheet 4, Rev. 1, Title

CHANGE TO: Drawing Status: SUPPORT

H-2-817983, Sheet 5, Rev. 0, Title

CHANGE TO: Drawing Status: SUPPORT

H-2-817983, Sheet 6, Rev. 1, Title

CHANGE TO: Drawing Status: SUPPORT

H-2-817983, Sheet 7, Rev. 0, Title

CHANGE TO: Drawing Status: SUPPORT

H-2-817983, Sheet 8, Rev. 0, Title

CHANGE TO: Drawing Status: SUPPORT

H-2-817985, Sheet 1, Rev. 1, Title

IS: INSTRUMENTATION ETF TRUCK LOAD-IN FACILITY SECTIONS AND DETAILS

CHANGE TO: INSTRUMENTATION ETF TRUCK LOAD-IN STATION SECTIONS AND DETAILS

Drawing Status: SUPPORT

H-2-817985, Sheet 2, Rev. 1, Title

IS: INSTRUMENTATION ETF TRUCK LOAD-IN FACILITY SECTIONS AND DETAILS

CHANGE TO: INSTRUMENTATION ETF TRUCK LOAD-IN STATION SECTIONS AND DETAILS

Drawing Status: SUPPORT

H-2-817987, Sheet 1, Rev. 1, Title

IS: ELECTRICAL ETF TRUCK LOAD-IN FACILITY SITE PLAN

CHANGE TO: ELECTRICAL ETF TRUCK LOAD-IN STATION SITE PLAN

Drawing Status: SUPPORT

H-2-817987, Sheet 3, Rev. 1, Title

IS: ELECTRICAL ETF TRUCK LOAD-IN FACILITY SECTIONS & DETAILS

CHANGE TO: ELECTRICAL ETF TRUCK LOAD-IN STATION SECTIONS & DETAILS

Drawing Status: SUPPORT

H-2-817987, Sheet 4, Rev. 1, Title

IS: ELECTRICAL ETF TRUCK LOAD-IN FACILITY SECTIONS & DETAILS

CHANGE TO: ELECTRICAL ETF TRUCK LOAD-IN STATION SECTIONS & DETAILS

Drawing Status: SUPPORT

H-2-817988, Sheet 1, Rev. 1, Title

IS: ELECTRICAL ETF TRUCK LOAD-IN FACILITY PLAN, ONE-LINE & DETAILS

CHANGE TO: ELECTRICAL ETF TRUCK LOAD-IN STATION PLAN, ONE-LINE & DETAILS

Drawing Status: ESSENTIAL

H-2-817988, Sheet 2, Rev. 1, Title

IS: ELECTRICAL ETF TRUCK LOAD-IN FACILITY PLAN, GND & HEAT TRACING

CHANGE TO: ELECTRICAL ETF TRUCK LOAD-IN STATION PLAN, GND & HEAT TRACING

Drawing Status: ESSENTIAL

H-2-817988, Sheet 3, Rev. 1, Title

IS: ELECTRICAL ETF TRUCK LOAD-IN FACILITY PANEL SCHEDULE & DETAILS

CHANGE TO: ELECTRICAL ETF TRUCK LOAD-IN STATION PANEL SCHEDULE & DETAILS

Drawing Status: ESSENTIAL

H-2-817989, Sheet 1, Rev. 1, Title

IS: ELECTRICAL ETF TRUCK LOAD-IN FACILITY ELEMENTARY DIAGRAM

CHANGE TO: ELECTRICAL ETF TRUCK LOAD-IN STATION ELEMENTARY DIAGRAM

Drawing Status: ESSENTIAL

ENGINEERING CHANGE NOTICE CONTINUATION SHEET	ECN 641703
Page 24 of 24	Date 5/13/97

H-2-817990, Sheet 1, Rev. 1, Title

IS: ELECTRICAL ETF TRUCK LOAD-IN FACILITY WIRE & CONDUIT SCHEDULE

CHANGE TO: ELECTRICAL ETF TRUCK LOAD-IN STATION WIRE & CONDUIT SCHEDULE

Drawing Status: ESSENTIAL

H-2-817991, Sheet 2, Rev. 1, Title

IS: ELECTRICAL ETF TRUCK LOAD-IN FACILITY TELECOMMUNICATIONS

CHANGE TO: ELECTRICAL ETF TRUCK LOAD-IN STATION TELECOMMUNICATIONS

Drawing Status: SUPPORT

ESSENTIAL

S

Cl 1
19

ENGINEERING CHANGE NOTICE

Page 1 of 10

1. ECN 647247

Proj. ECN

2. ECN Category (mark one)	3. Originator's Name, Organization, MSIN, and Telephone No.	4. USQ Required?	5. Date
Supplemental [X] Direct Revision [] Change ECN [] Temporary [] Standby [] Supersedure [] Cancel/Void []	RN Wagner/32230/S6-72/376-4460	[] Yes [X] No	August 27, 1998
	6. Project Title/No./Work Order No. Install Tent Over ETF Load-In Station/A4055	7. Bldg./Sys./Fac. No. 2025EC/59A/ 200 Area ETF	8. Approval Designator NA
	9. Document Numbers Changed by this ECN (includes sheet no. and rev.) See Block 13	10. Related ECN No(s). NA	11. Related PO No. NA

12a. Modification Work	12b. Work Package No.	12c. Modification Work Complete	12d. Restored to Original Condition (Temp. or Standby ECN only)
[X] Yes (fill out Blk. 12b) [] No (NA Blks. 12b, 12c, 12d)	EL-97-00853	Design Authority/Cog. Engineer Signature & Date	N/A Design Authority/Cog. Engineer Signature & Date

13a. Description of Change — 13b. Design Baseline Document? [X] Yes [] No

This ECN installs a tent over the ETF Load-In Station to provide shelter during inclement weather. Mechanical modifications to the Load-In Station necessary to accommodate the tent placement are covered in this ECN.

Drawings affected are:

- H-2-817970 Sheet 1, Rev. 1
- H-2-817972 Sheet 1, Rev. 1
- H-2-817975 Sheet 1, Rev. 5
- H-2-817976 Sheet 1, Rev. 1

Concrete anchor bolts for relocation of the Load-In transfer line support frame shall be Hilti P/N 0045407, Description Code KB II SS 58-812 Ext Trd, or Engineering approved equivalent. Piping, fittings, and jointing methods shall meet the requirements of Piping Specification Class M-9. Install, inspect, and test the new piping installation in accordance with ASME B31.3 and Addenda for Category D fluid service.

(Block 13a continued on Page 3)

14a. Justification (mark one)

Criteria Change	[]	Design Improvement	[X]	Environmental	[]	Facility Deactivation	[]
As-Found	[]	Facilitate Const	[]	Const. Error/Omission	[]	Design Error/Omission	[]

14b. Justification Details

The tent will provide shelter to ensure operator safety and allow continuity of operations during inclement weather.

15. Distribution (include name, MSIN, and no. of copies)

N. J. Sullivan	S6-72	1	J. E. Geary	S6-71	1
A. K. Yoakum	S6-71	1	E. A. McNamar	S6-72	1
R. N. Wagner*	S6-72	2	M. W. Bowman	S6-72	1
WCC Planning	S6-71*	1	T. W. Dallas	S6-74	1
L. L. Lin	S6-72	1	D. L. Tubbs	S6-74	1
D. L. Flyckt	S6-71	1	C. M. Towne	S6-74	1

(* = 1 Advance Copy)

IPF 7 - S6-72 1

IPF 4 - H6-26 1

RELEASE STAMP

DATE: SEP 08 1998

STA: 4

HANFORD RELEASE

ID: 2.

A-7900-013-2 (05/96) GEF095

A-7900-013-1

ENGINEERING CHANGE NOTICE	Page 2 of 10	1. ECN (use no. from pg. 1) 647247

16. Design Verification Required	17 Cost Impact ——> NA <—— ENGINEERING		CONSTRUCTION		18 Schedule Impact (days) ——> NA <——	
[X] Yes	Additional	[] $	Additional	[] $	Improvement	[]
[] No	Savings	[] $	Savings	[] $	Delay	[]

19. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 13. Enter the affected document number in Block 20.

SDD/DD	[NA]	Seismic/Stress Analysis	[NA]	Tank Calibration Manual	[NA]
Functional Design Criteria	[NA]	Stress/Design Report	[NA]	Health Physics Procedure	[NA]
Operating Specification	[NA]	Interface Control Drawing	[NA]	Spares Multiple Unit Listing	[NA]
Criticality Specification	[NA]	Calibration Procedure	[NA]	Test Procedures/Specification	[NA]
Conceptual Design Report	[NA]	Installation Procedure	[NA]	Component Index	[NA]
Equipment Spec	[NA]	Maintenance Procedure	[NA]	ASME Coded Item	[NA]
Const. Spec.	[NA]	Engineering Procedure	[NA]	Human Factor Consideration	[NA]
Procurement Spec.	[NA]	Operating Instruction	[NA]	Computer Software	[NA]
Vendor Information	[NA]	Operating Procedure	[NA]	Electric Circuit Schedule	[NA]
OM Manual	[NA]	Operational Safety Requirement	[NA]	ICRS Procedure	[NA]
FSAR/SAR	[NA]	IEFD Drawing	[NA]	Process Control Manual/Plan	[NA]
Safety Equipment List	[NA]	C.E. Arrangement Drawing	[NA]	Process Flow Chart	[NA]
Radiation Work Permit	[NA]	Essential Material Specification	[NA]	Purchase Requisition	[NA]
Environmental Impact Statement	[NA]	Fac Proc Samp. Schedule	[NA]	Tickler File	[NA]
Environmental Report	[NA]	Inspection Plan	[NA]		[]
Environmental Permit	[NA]	Inventory Adjustment Request	[NA]		[]

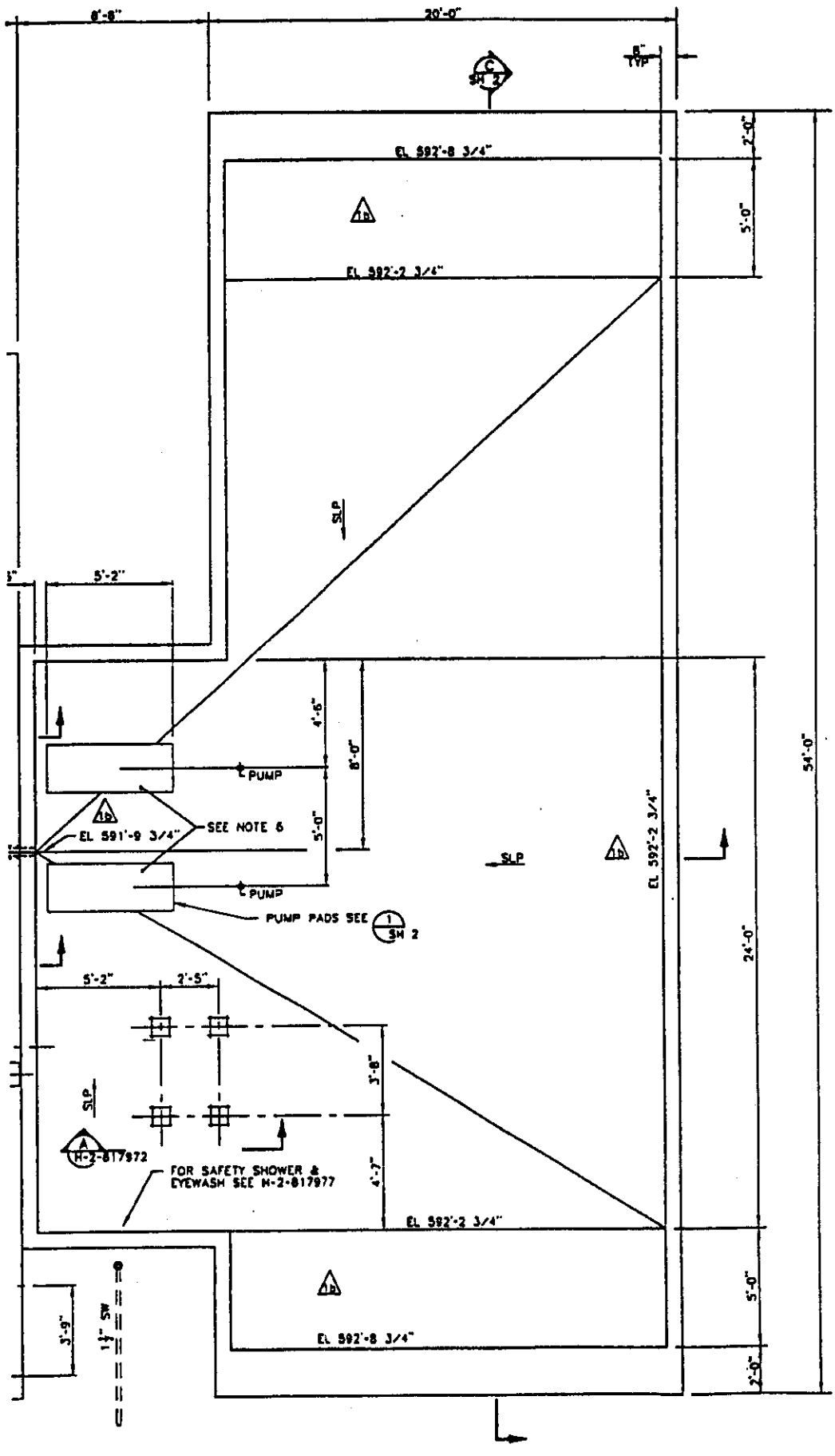
20. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

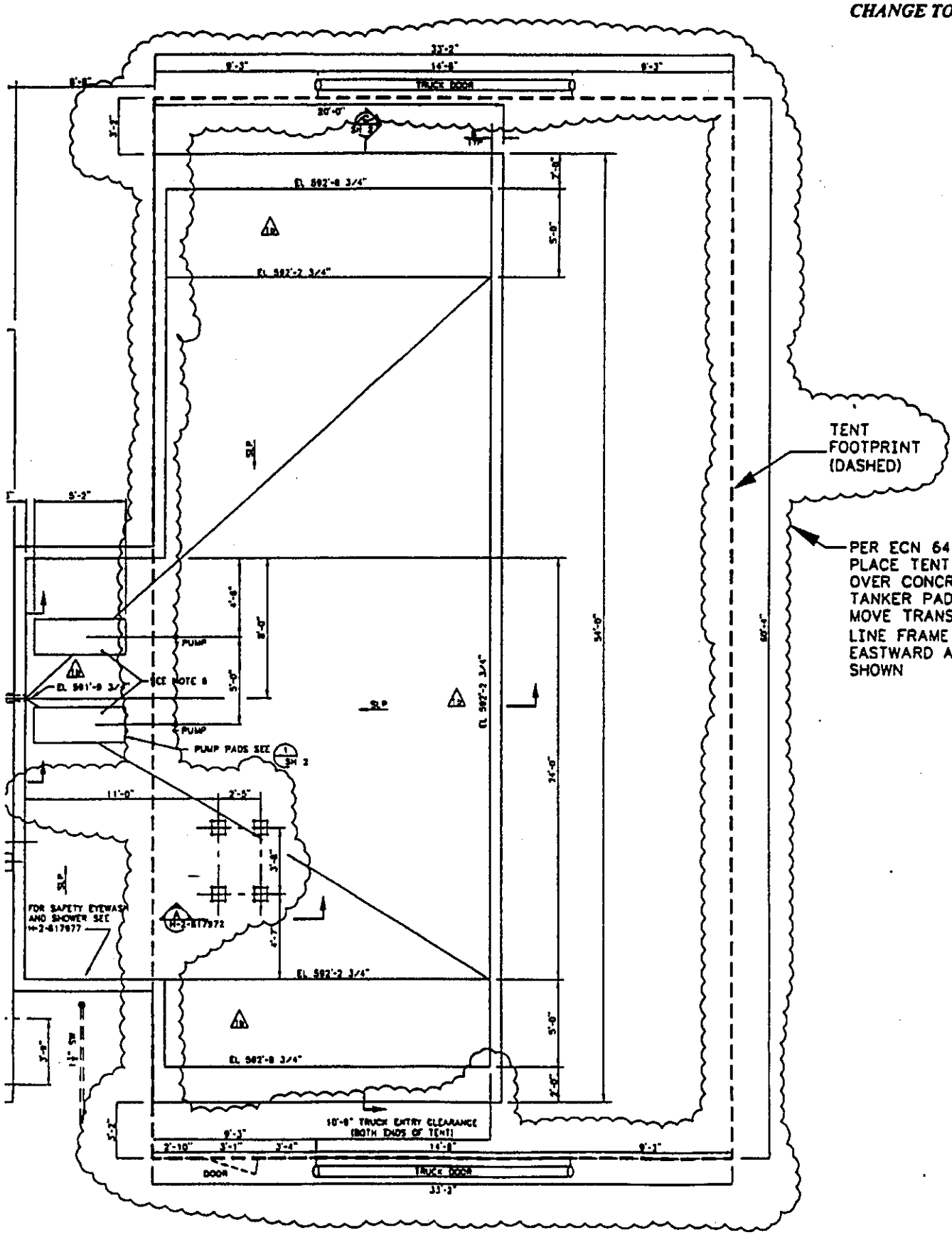
Document Number/Revision	Document Number/Revision	Document Number Revision
No other documents are affected by this ECN.		

21 Approvals

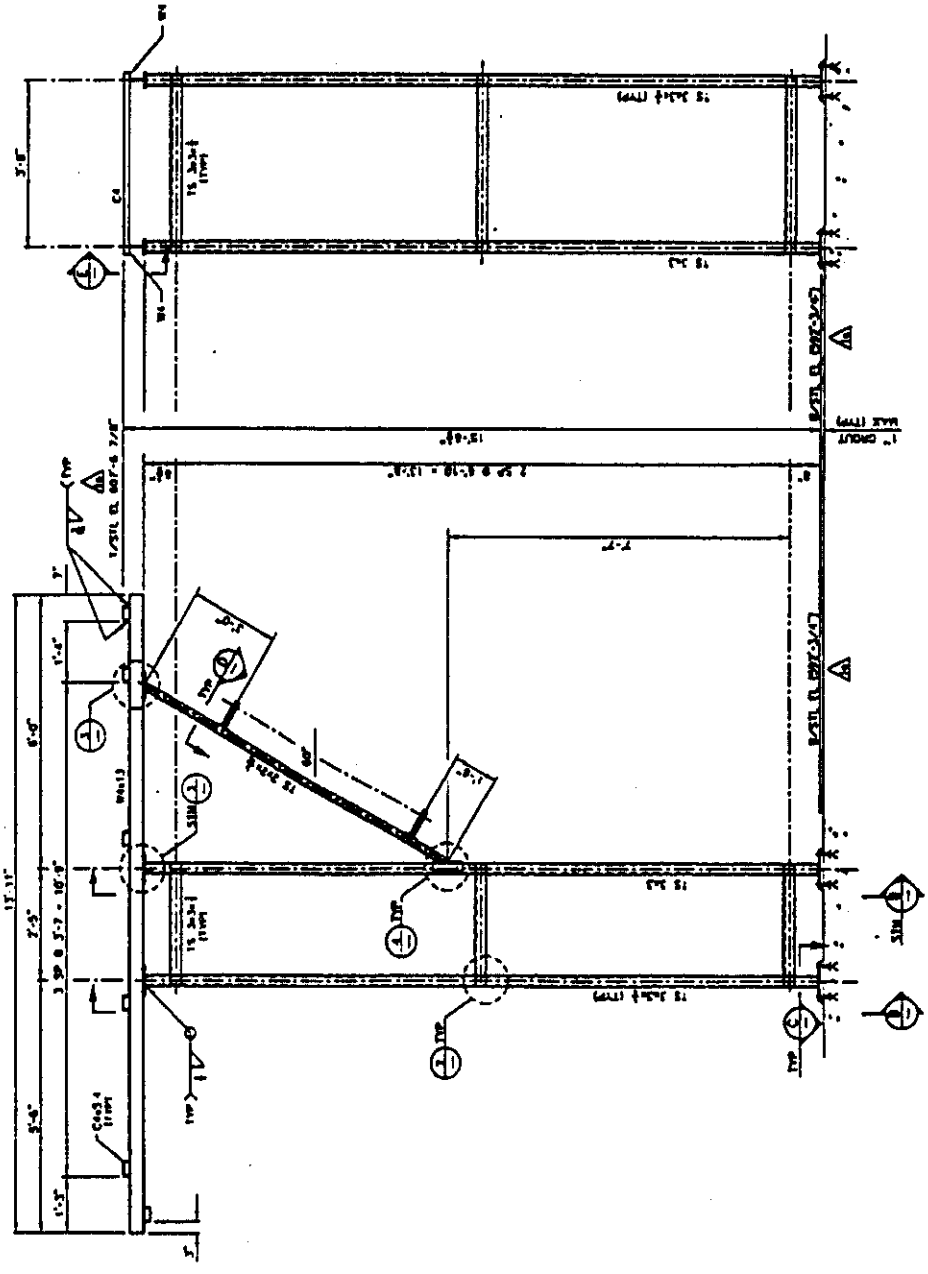
Signature		Date	Signature		Date
Design Authority – R. N. Wagner		9/27/98	Design Agent – R. N. Wagner		9/27/98
Cog. Eng. – R. N. Wagner		9/27/98	PE		
Cog. Mgr. – N. J. Sullivan (Informal Design Review)		9-8-98	QA		
QA			Safety		
Safety			Design		
Environ.			Environ.		
Other			Other		
Operations – J. E. Geary		9-8-98			
			DEPARTMENT OF ENERGY		
			Signature or a Control Number that tracks the Approval Signature		
			ADDITIONAL		

ECN 647247 – 8/27/98
Page 3 of 10
Block 13a Cont'd
H-2-817970 Sh 1 Rev 1
Zones A3–F6
IS NOW:



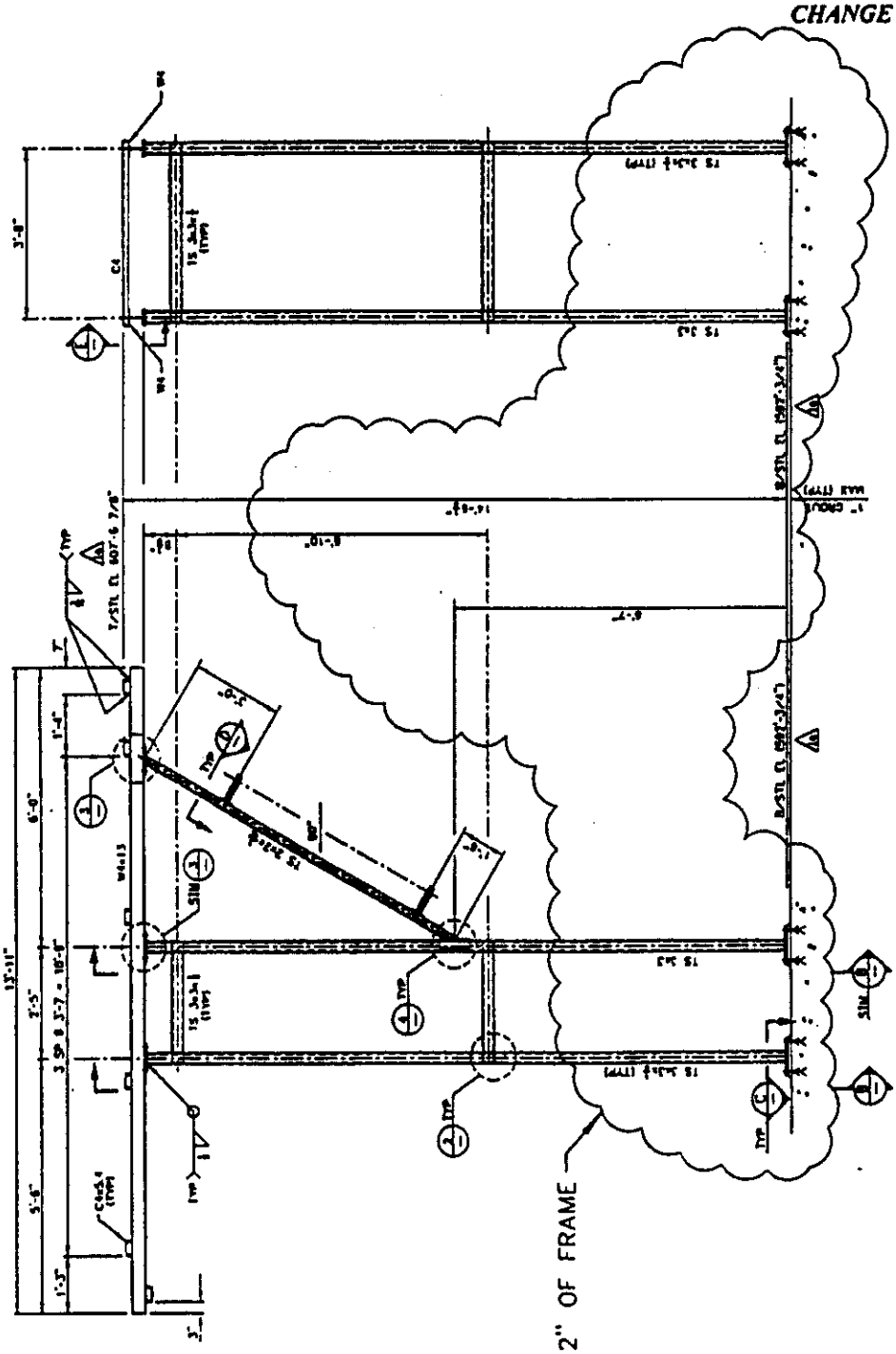

TRUCK DOOR
EL 592'-8 3/4"
EL 592'-2 3/4"
PUMP
PUMP
SEE NOTE 8
PUMP PADS SEE
FOR SAFETY EYEWASH AND SHOWER SEE H-2-817977
H-2-817972
10'-8" TRUCK ENTRY CLEARANCE (BOTH ENDS OF TENT)
DOOR
TRUCK DOOR
TENT FOOTPRINT (DASHED)
PER ECN 647247: PLACE TENT OVER CONCRETE TANKER PAD AND MOVE TRANSFER LINE FRAME ~6' EASTWARD AS SHOWN

ECN 647247 – 8/27/98
Page 5 of 10
Block 13a Cont'd
H-2-817972 Sh 1 Rev 1
Zones C4–F8
IS NOW:



A SECTION
H-2-817972, SHT 3/4" = 1'-0

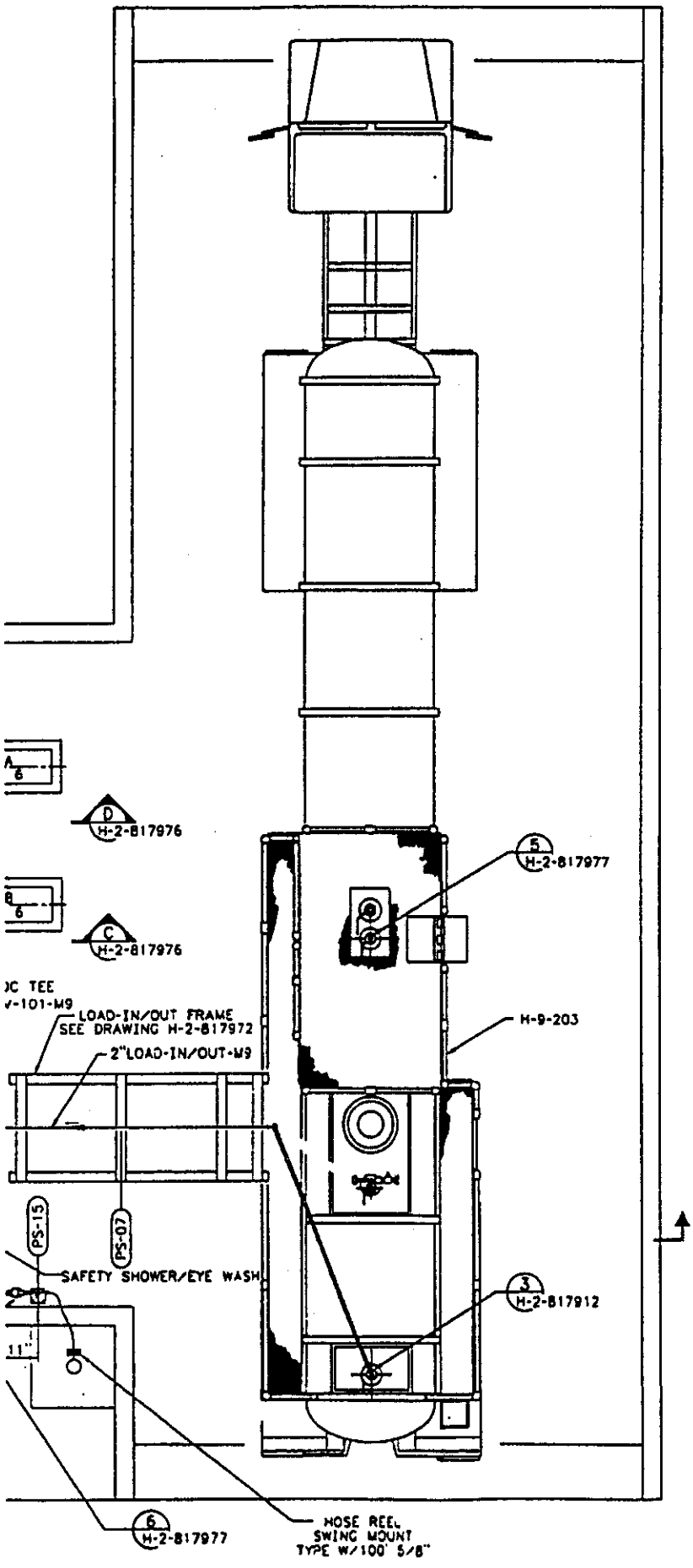
ECN 647247 – 8/27/98
Page 6 of 10
Block 13a Cont'd
H-2-817972 Sh 1 Rev 1
Zones C4–F8
CHANGE TO:



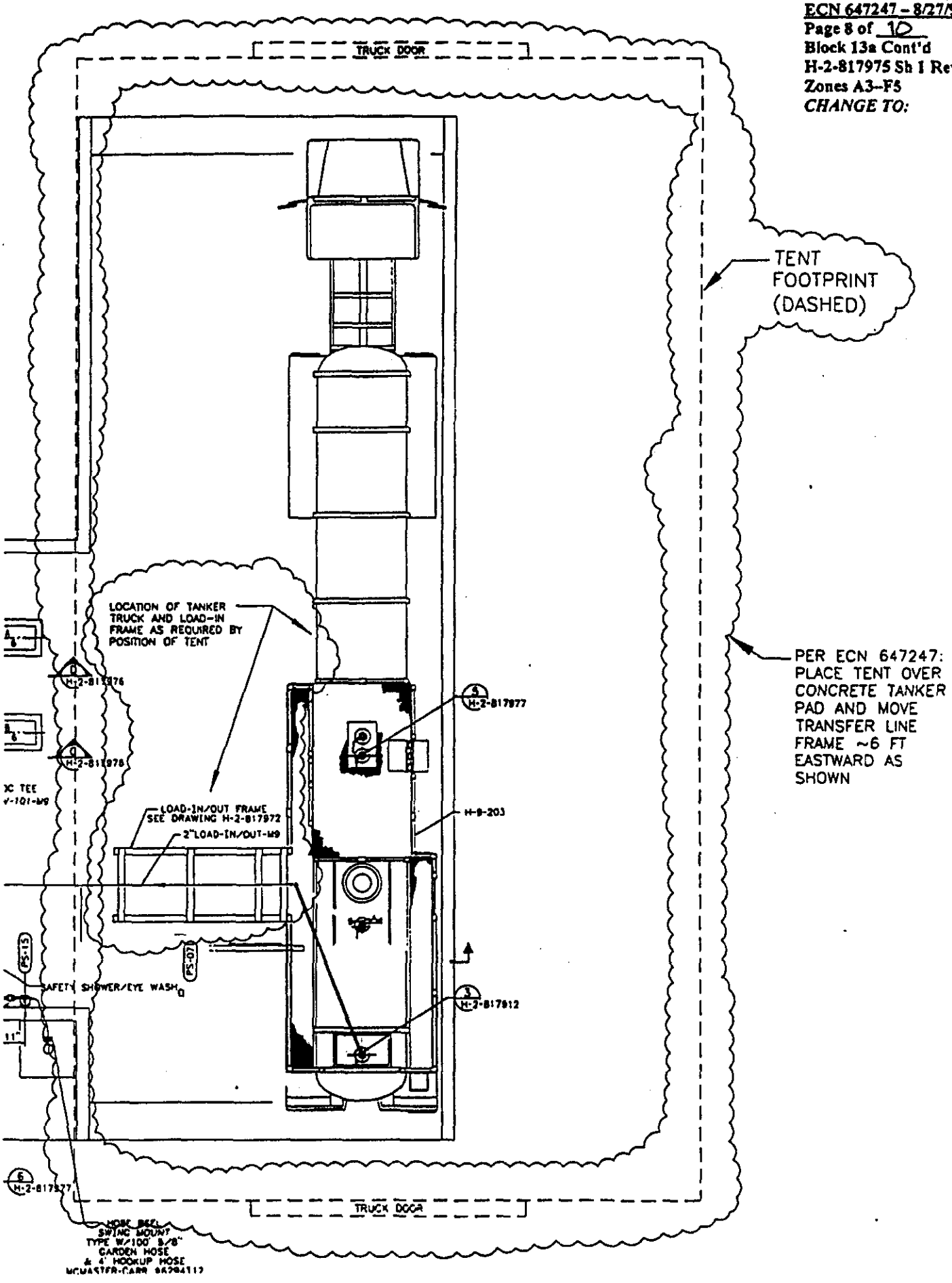
A SECTION
H-2-817970, SHT 3/4" = 1'-0

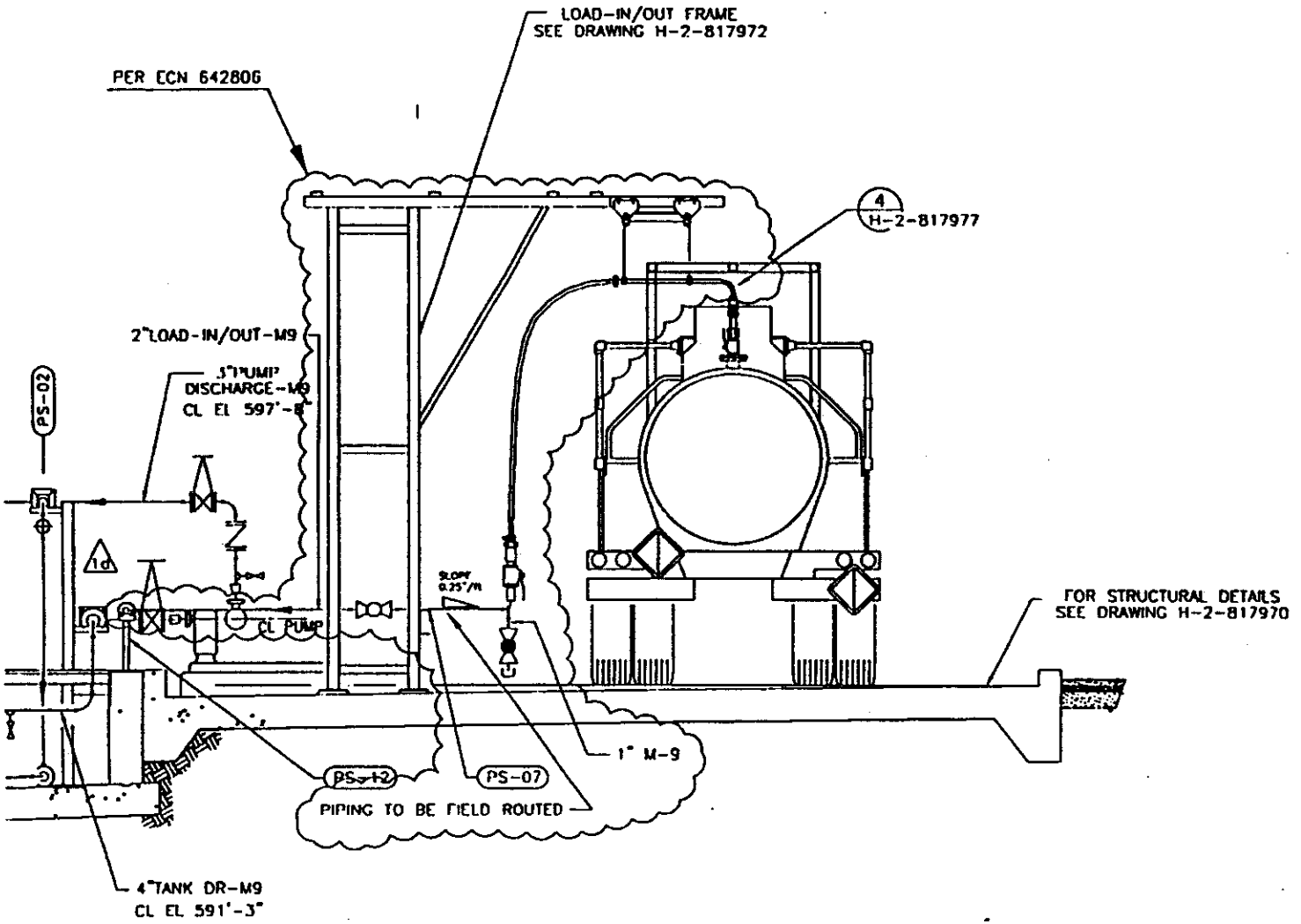
PER ECN 647247:
REMOVE BOTTOM 12" OF FRAME

Block 13a Cont'd
H-2-817975 Sh 1 Rev 5
Zones A3–F5
IS NOW:



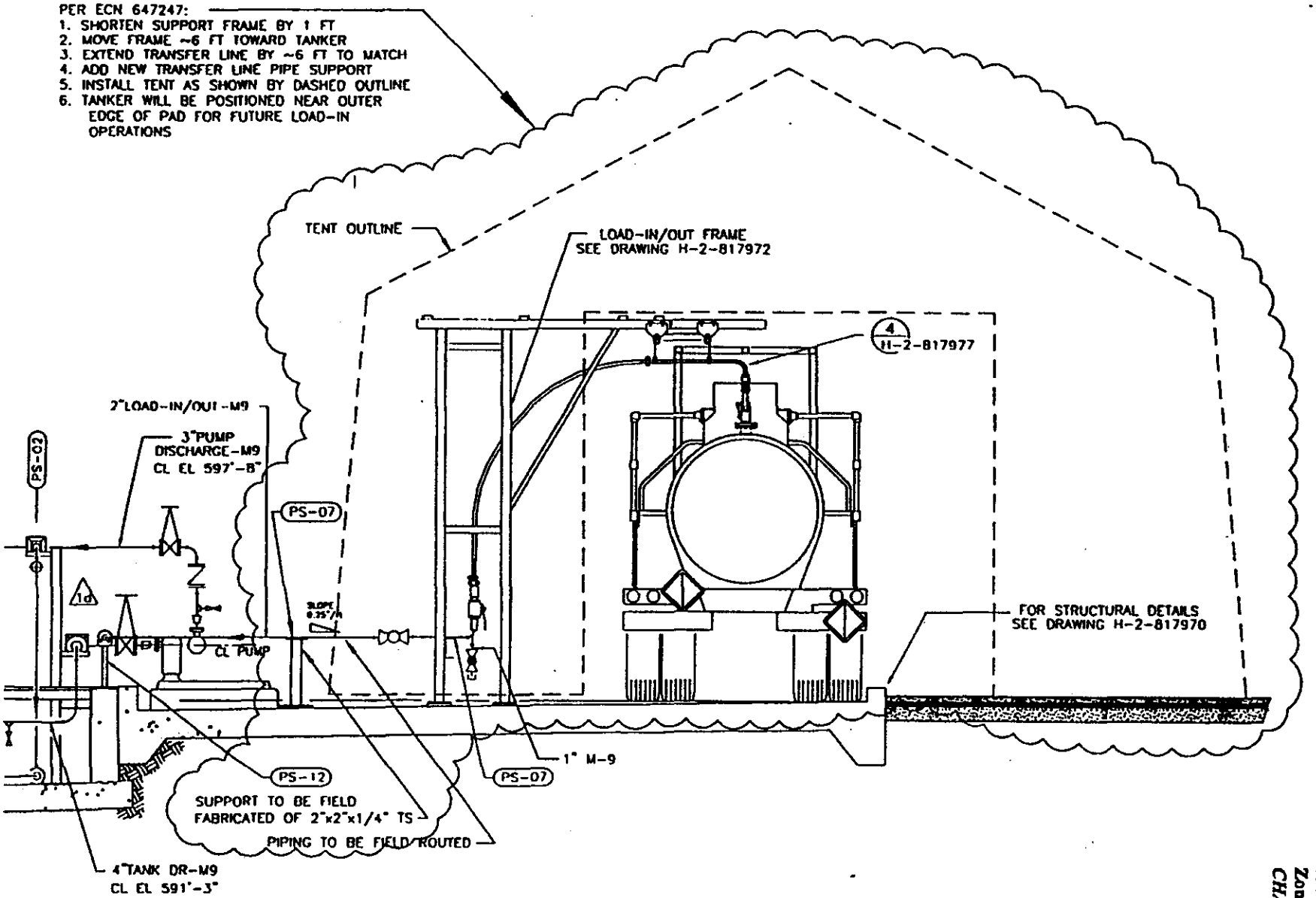
ECN 647247 - 8/27/98
Page 8 of 10
Block 13a Cont'd
H-2-817975 Sh 1 Rev 5
Zones A3--F5
CHANGE TO:





B SECTION
H-2-817975 SCALE: 3/8"=1'-0"

ECN 647247-8/27/98
Page 9 of 12
Block 13a Cont'd
H-2-817976 Sh 1 Rev 1
Zones A4-D6
IS NOW:



B SECTION
H-2-817975 SCALE: 3/8"=1'-0"

ECN 647247 – 8/27/98
Page 10 of 10
Block 13a Cont'd
H-2-817976 Sh 1 Rev 1
Zones A4–D6
CHANGE TO:

1 of 4

ENGINEERING CHANGE NOTICE

Page 1 of 5

1. ECN 649104

Proj. ECN

2. ECN Category (mark one)	3. Originator's Name, Organization, MSIN, and Telephone No.	4. USQ Required?	5. Date
Supplemental [x] Direct Revision [] Change ECN [] Temporary [] Standby [] Supersedure [] Cancel/Void []	AF Crane, 32910, S6-72, 372-3152	[] Yes [x] No	2/16/99
	6. Project Title/No./Work Order No. Truck Load-in Filter/CACN 106883 COA EK00	7. Bldg./Sys./Fac. No. 2025E/59A/ETF	8. Approval Designator N/A
	9. Document Numbers Changed by this ECN (includes sheet no. and rev.) See Block 13a	10. Related ECN No(s). 647275 648786	11. Related PO No. N/A

12a. Modification Work	12b. Work Package No.	12c. Modification Work Complete	12d. Restored to Original Condition (Temp. or Standby ECN only)
[x] Yes (fill out Blk. 12b) [] No (NA Blks. 12b, 12c, 12d)	EL-99-00071/M	Design Authority/Cog. Engineer Signature & Date	N/A Design Authority/Cog. Engineer Signature & Date

13a. Description of Change

13b. Design Baseline Document? [x] Yes [] No

Affected Drawings

H-2-817969, Sh 1, Rev 1
H-2-817969, Sh 2 Rev 1
H-2-817969, Sh 3 Rev 1
H-2-817970, Sh 1, Rev 1
H-2-817970, Sh 2, Rev 1

See attached continuation sheet for description of changes.

DAVID STEPHEN McNAMAR STATE OF WASHINGTON 2-18-99 0027710 REGISTERED PROFESSIONAL ENGINEER

EXPIRES 10/06/00

Construction to be in accordance with the requirements of construction specification W-291H-C2.

14a. Justification (mark one)

Criteria Change	[x]	Design Improvement	[]	Environmental	[]	Facility Deactivation	[]
As-Found	[]	Facilitate Const	[]	Const. Error/Omission	[]	Design Error/Omission	[]

14b. Justification Details

Supplemental offload and filtration capability is required to simultaneously accept liquid wastes containing solids while receiving existing waste generator shipments.

Informal design review performed by EA McNamar

15. Distribution (include name, MSIN, and no. of copies)

MW Bowman	S6-72 (1)	EA McNamar	S6-72 (1)	WCC Planning S6-71 (1)*
BS Darling	T4-05 (1)	DB Powell	T3-07 (1)	(* = 1 Advance Copy)
AF Crane	S6-72 (1)*	CD Skogley	T4-05 (1)	
DL Flyckt	S6-72 (1)	DK Smith	S6-71 (1)	
JM Isdell	B4-39 (1)*	NJ Sullivan	S6-72 (1)	

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DATE: FEB 18 1999
STA: 30
HANFORD RELEASE
ID: 18

ENGINEERING CHANGE NOTICE	Page 2 of 8	1. ECN 649104

16. Design Verification Required	17. Cost Impact ——> NA <—— ENGINEERING		CONSTRUCTION		18. Schedule Impact (days) ——> NA <——
[X] Yes	Additional	[] $	Additional	[] $	Improvement []
[] No	Savings	[] $	Savings	[] $	Delay []

19. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 13. Enter the affected document number in Block 20.

SDD/DD	[NA]	Seismic/Stress Analysis	[NA]	Tank Calibration Manual	[NA]
Functional Design Criteria	[NA]	Stress/Design Report	[NA]	Health Physics Procedure	[NA]
Operating Specification	[NA]	Interface Control Drawing	[NA]	Spares Multiple Unit Listing	[NA]
Criticality Specification	[NA]	Calibration Procedure	[NA]	Test Procedures/Specification	[NA]
Conceptual Design Report	[NA]	Installation Procedure	[NA]	Component Index	[NA]
Equipment Spec.	[NA]	Maintenance Procedure	[NA]	ASME Coded Item	[NA]
Const. Spec.	[NA]	Engineering Procedure	[NA]	Human Factor Consideration	[NA]
Procurement Spec.	[NA]	Operating Instruction	[NA]	Computer Software	[NA]
Vendor Information	[X]	Operating Procedure	[NA]	Electric Circuit Schedule	[NA]
OM Manual	[NA]	Operational Safety Requirement	[NA]	ICRS Procedure	[NA]
FSAR/SAR	[NA]	IEFD Drawing	[NA]	Process Control Manual/Plan	[NA]
Safety Equipment List	[NA]	Cell Arrangement Drawing	[NA]	Process Flow Chart	[NA]
Radiation Work Permit	[NA]	Essential Material Specification	[NA]	Purchase Requisition	[NA]
Environmental Impact Statement	[NA]	Fac. Proc. Samp. Schedule	[NA]	Tickler File	[NA]
Environmental Report	[NA]	Inspection Plan	[NA]		[]
Environmental Permit	[NA]	Inventory Adjustment Request	[NA]		[]

20. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

Document Number/Revision	Document Number/Revision	Document Number Revision
N/A		

21. Approvals

Signature	Date	Signature	Date
Design Authority AF Crane AF Crane	2-19-99	Design Agent AF Crane AF Crane	2-16-99
Cog. Eng.		PE David McSloan	2-18-99
Cog. Mgr. NJ Sullivan NJ Sullivan	2-17-99	QA	
QA		Safety	
Safety		Design	
Environ. DL Flyckt DL Flyckt	2/11/99	Environ.	
Other		Other	
Operations DK Smith DK Smith	2-18-99		
EA McNamar E.A. McNamar	2/16/99		
Informal Design Review			
		DEPARTMENT OF ENERGY	
		Signature or a Control Number that tracks the Approval Signature	
		ADDITIONAL	

H-2-817969, Sh 1, Rev 1

Zone D-3: Add asphalt and concrete pad areas.

H-2-817969, Sh 2 Rev 1

Zone E-3: Add asphalt and concrete pad areas.

H-2-817969, Sh 3 Rev 1

Zone D-7: Add asphalt and concrete pad areas, and elevations.

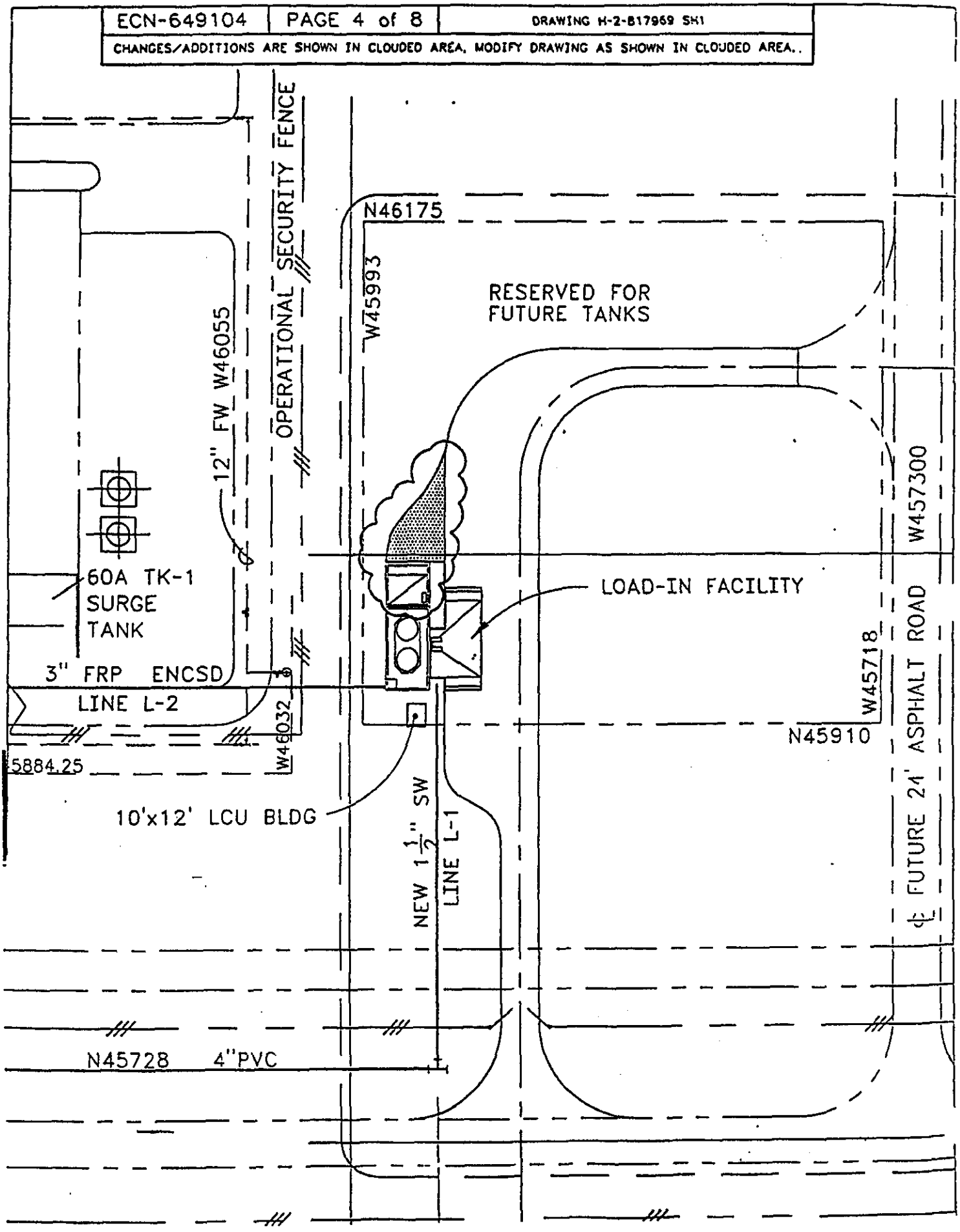
H-2-817970, Sh 1 Rev 1

Zones C/F-5/8: Add asphalt and concrete pad areas, filter skid, pump base, dimensional details and Section G reference.

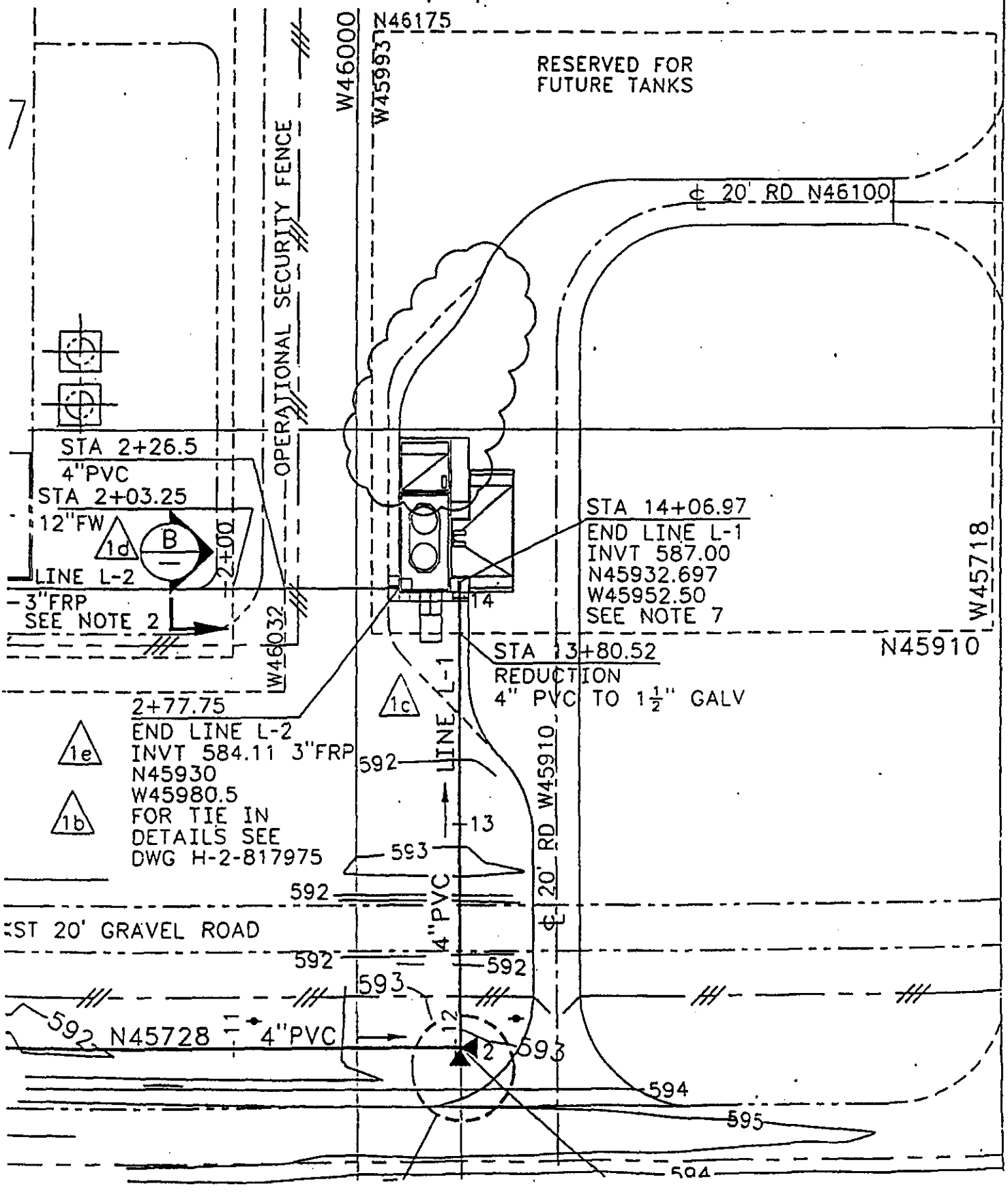
H-2-817970, Sh 2 Rev 1

Zones A/D-4/8: Add Sections F and G and Detail 6. Add note to Section E identifying elevations of respective pump pads.

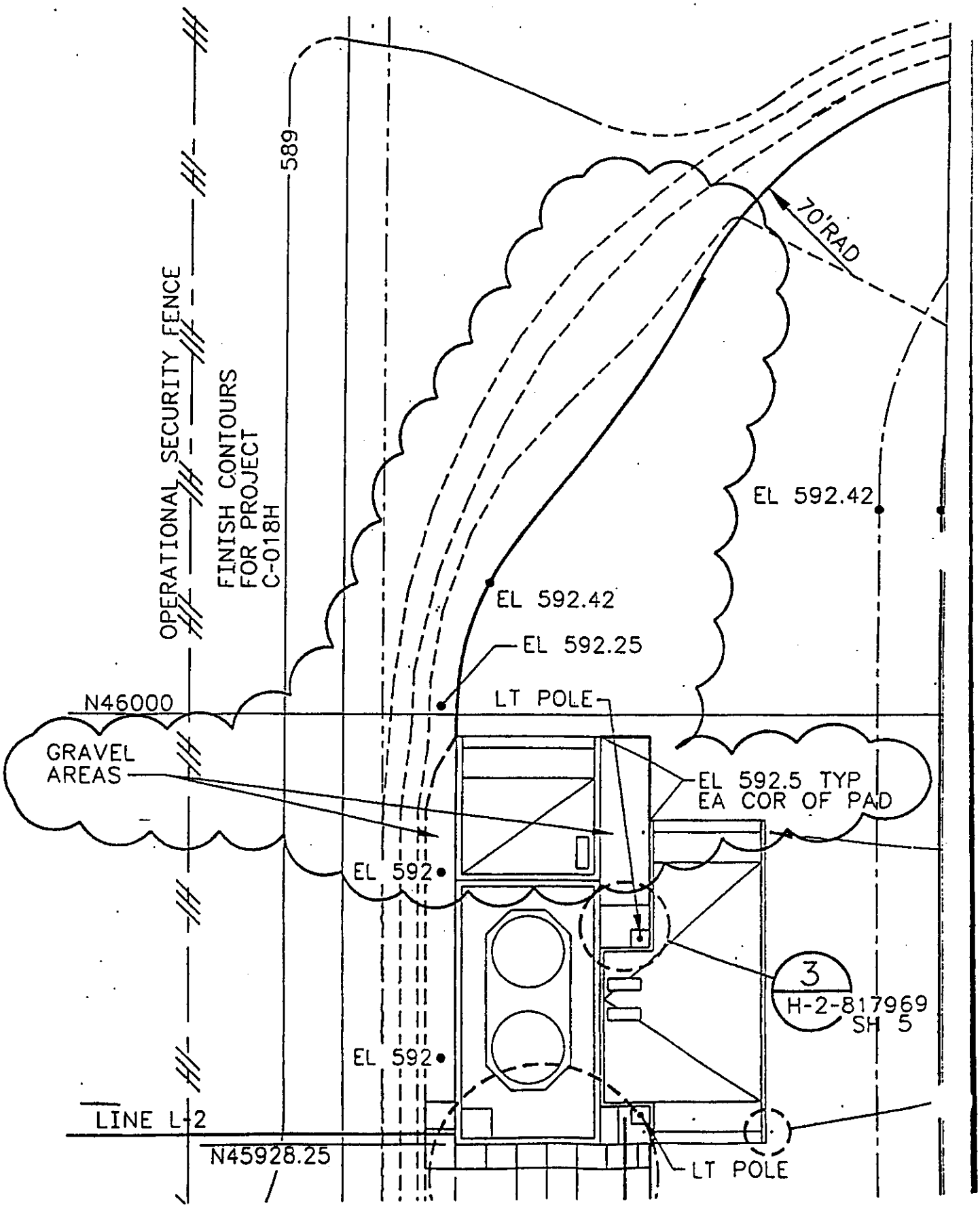
ECN-649104	PAGE 4 of 8	DRAWING H-2-B17969 SH1
CHANGES/ADDITIONS ARE SHOWN IN CLOUDED AREA. MODIFY DRAWING AS SHOWN IN CLOUDED AREA..		

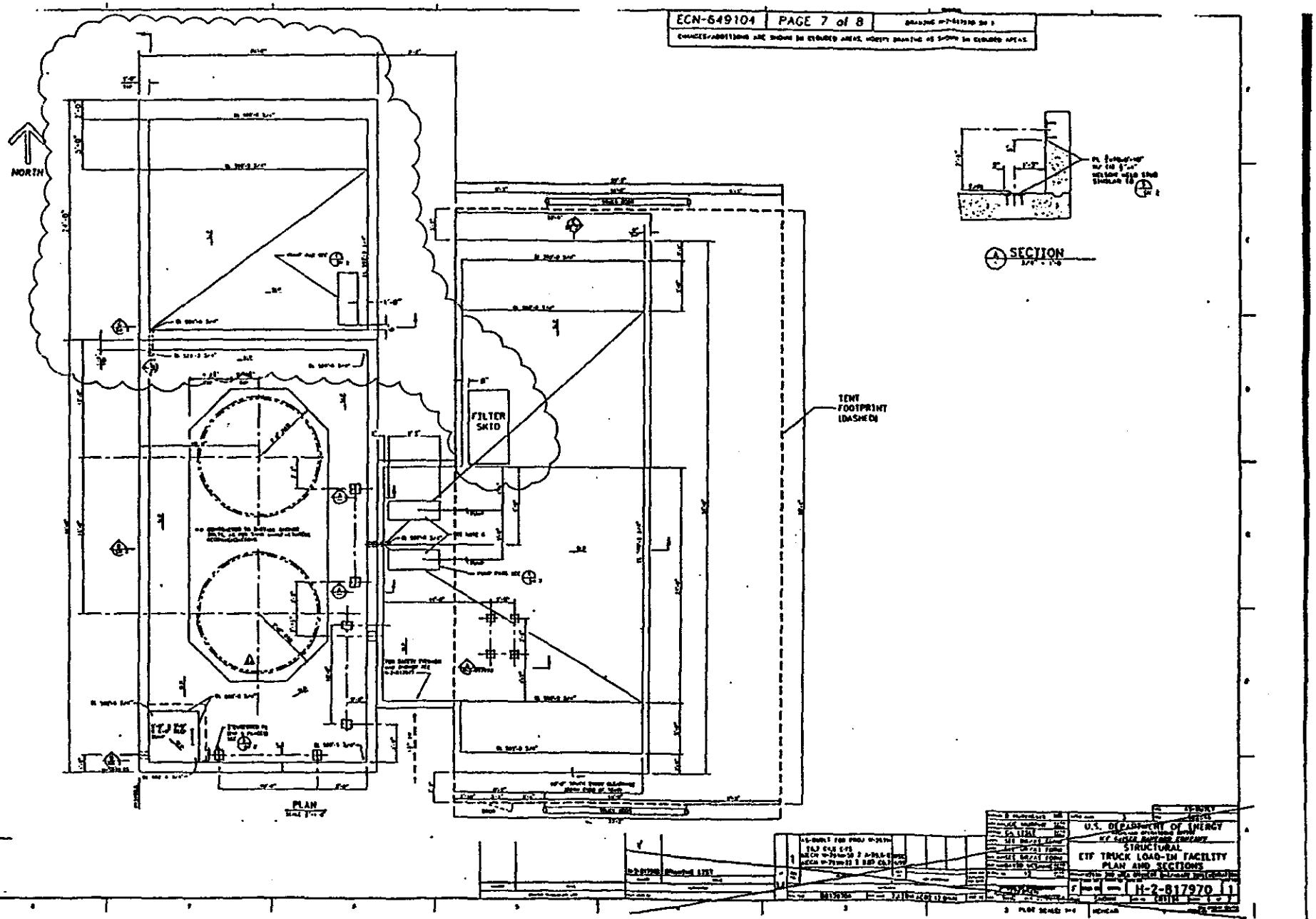


ECN-649104	PAGE 5 of 8	DRAWING H-2-817969 SH2
CHANGES/ADDITIONS ARE SHOWN IN CLOUDED AREA. MODIFY DRAWING AS SHOWN IN CLOUDED AREA.		



ECN-649104	PAGE 6 of 8	DRAWING H-2-817969 SH 3
CHANGES/ADDITIONS ARE SHOWN IN CLOUDED AREA. MODIFY DRAWING AS SHOWN IN CLOUDED AREA.		





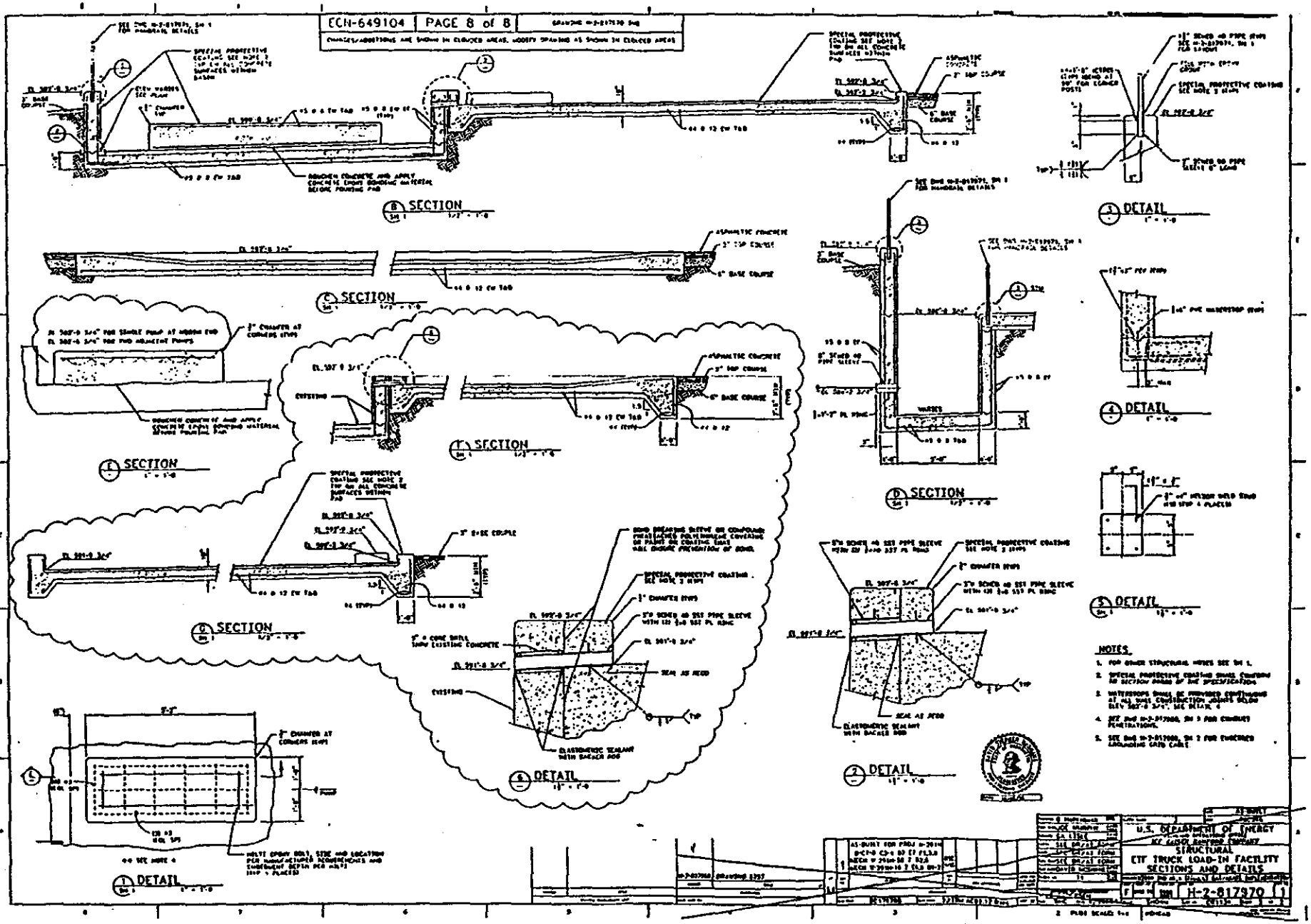
U.S. DEPARTMENT OF ENERGY

STRUCTURAL

ETF TRUCK LOAD-IN FACILITY PLAN AND SECTIONS

H-2-817970

ECN-649104 | PAGE 8 of 8



U.S. DEPARTMENT OF ENERGY
MK-FERGUSON COMPANY
STRUCTURAL
CTF TRUCK LOAD-IN FACILITY
SECTIONS AND DETAILS
H-2-817970

S

CPF 18
CPF 7 H
1PF 1PF

ENGINEERING CHANGE NOTICE

ESSENTIAL

Page 1 of 18

1. ECN 644244

Proj. ECN

2. ECN Category (mark one)	3. Originator's Name, Organization, MSIN, and Telephone No.	4. USQ Required?	5. Date
Supplemental [X] Direct Revision [X] Change ECN [ ] CAM 12/14/98 Temporary [ ] Standby [ ] Supersedure [ ] Cancel/Void [ ]	E.A. McNAMAR, 32200, S6-72, 373-3465	[ ] Yes [ ] No	11-20-98
	6. Project Title/No./Work Order No. CHEMICAL FEED PUMP RELOCATION	7. Bldg./Sys./Fac. No. 2025E	8. Approval Designator NA
	9. Document Numbers Changed by this ECN (includes sheet no. and rev.) SEE BLOCK 13a	10. Related ECN No(s). 627754 644243	11. Related PO No. NA

12a. Modification Work	12b. Work Package No.	12c. Modification Work Complete	12d. Restored to Original Condition (Temp. or Standby ECN only)
[X] Yes (fill out Blk. 12b) [ ] No (NA Blks. 12b, 12c, 12d)	EL- 97-00622	Design Authority/Cog. Engineer Signature & Date	NA Design Authority/Cog. Engineer Signature & Date

13a. Description of Change

13b. Design Baseline Document? [X] Yes [ ] No

- H-2-88992 SH1, REV 9
- H-2-89337 SH1, REV 10
- H-2-89181 SH1, REV 5
- H-2-89211 SH1, REV 1
- H-2-89200 SH1, REV 3
- H-2-89047 SH1, REV 6
- H-2-89047 SH2, REV 0
- H-2-89162 SH1, REV 4
- ~~H-2-89351 SH1, REV 4~~

Install, inspect and test new piping installation in accordance with ASME B31.3 Normal Fluid Service.

CAM 3/22/99

SEE PAGE 3 FOR DESCRIPTION OF CHANGES

14a. Justification (mark one)

Criteria Change	[ ]	Design Improvement	[X]	Environmental	[ ]	Facility Deactivation	[ ]
As-Found	[ ]	Facilitate Const	[ ]	Const. Error/Omission	[ ]	Design Error/Omission	[ ]

14b. Justification Details

RELOCATE EXISTING CHEMICAL FEED PUMPS 2025E-65C-P-5, -6, -7 FROM THE TOP OF SURGE TANK 2025E-60A-TK-1 TO INSIDE THE EFFLUENT TREATMENT FACILITY.

15. Distribution (include name, MSIN, and no. of copies)

E. A. McNAMAR	S6-72 *	A. K. Yoakum	S6-71
K. D. JUNT	G3-17	T. W. Dallas	S6-74
WCC Planning	S6-71 *	M. W. Bowman	S6-72
L. L. Lin	S6-72 *	B. S. Darling	T4-05
N. J. Sullivan	S6-72	J. M. Petty	S6-74

* = 1 Advance Copy

RELEASE STAMP

DATE: MAR 22 1999

STA: 30 HANFORD RELEASE ID: 18

A-7900-013-2 (05/96) GEF095

ENGINEERING CHANGE NOTICE	Page 2 of 18	1. ECN (use no. from pg. 1) 644244

16. Design Verification Required	17. Cost Impact				18. Schedule Impact (days)	
	ENGINEERING		CONSTRUCTION			
[X] Yes	Additional	[] $ NA	Additional	[] $ NA	Improvement	[] NA
[ ] No	Savings	[] $ NA	Savings	[] $ NA	Delay	[] NA

19. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 13. Enter the affected document number in Block 20.

SDD/DD	[]	Seismic/Stress Analysis	[]	Tank Calibration Manual	[]
Functional Design Criteria	[]	Stress/Design Report	[]	Health Physics Procedure	[]
Operating Specification	[]	Interface Control Drawing	[]	Spares Multiple Unit Listing	[]
Criticality Specification	[]	Calibration Procedure	[]	Test Procedures/Specification	[]
Conceptual Design Report	[]	Installation Procedure	[]	Component Index	[X]
Equipment Spec.	[]	Maintenance Procedure	[]	ASME Coded Item	[]
Const. Spec.	[]	Engineering Procedure	[]	Human Factor Consideration	[]
Procurement Spec.	[]	Operating Instruction	[]	Computer Software	[]
Vendor Information	[X]	Operating Procecure	[X]	Electric Circuit Schedule	[]
OM Manual	[]	Operational Safety Requirement	[]	ICRS Procedure	[]
FSAR/SAR	[]	IEFD Drawing	[]	Process Control Manual/Plan	[]
Safety Equipment List	[]	Cell Arrangement Drawing	[]	Process Flow Chart	[]
Radiation Work Permit	[]	Essential Material Specification	[]	Purchase Requisition	[]
Environmental Impact Statement	[]	Fac. Proc Samp. Schedule	[]	Tickler File	[]
Environmental Report	[]	Inspection Plan	[]		[]
Environmental Permit	[]	Inventory Adjustment Request	[]		[]

20. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

Document Number/Revision	Document Number/Revision	Document Number Revision
POP-60-006		
POP-65C-001		

21. Approvals

Signature		Date	Signature		Date
Design Authority	E.A. McNamar C.A. Anderson	12/10/98	Design Agent	E.A. McNamar C.A. Anderson	12/10/98
Cog. Eng.	E.A. McNamar C.A. Anderson	12/10/98	PE		
Cog. Mgr. N.J. Sullivan (Informal Design Review)	N.J. Sullivan	3-22-99	QA		
QA			Safety		
Safety			Design		
Environ.			Environ.		
Other			Other		
			DEPARTMENT OF ENERGY		
			Signature or a Control Number that tracks the Approval Signature		
			ADDITIONAL		

Description of Changes

1) H-2-88992 SH 1, REV 9
Modify as shown on page 4

2) H-2-89337 SH 1, REV 10
Modify as shown on page 5

3) H-2-89181 SH1, REV 5
a) Modify as shown on page 6
b) Add ENLARGED PLAN, as shown on page 7
c) Add SECTION D, as shown on page 8
d) Add SECTION E, as shown on page 9
e) Add SECTION F, as shown on page 10

4) H-2-89211 SH 1, REV 1
a) Add TYPE 32 SUPPORT AND TYPE 35 SUPPORT, as shown on page 11
b) Add TYPE 33 SUPPORT, as shown on page 12
c) Add TYPE 34 SUPPORT SKID, as shown on page 13

5) H-2-89200 SH 1, REV 3
a) Modify as shown on page 14
b) Add ENLARGED PLAN and SECTIONS F & G, as shown on page 15

6) H-2-89047 SH 1, REV 6
Modify as shown on page 16

7) H-2-89162 SH 1, REV 4
Modify as shown on page 17

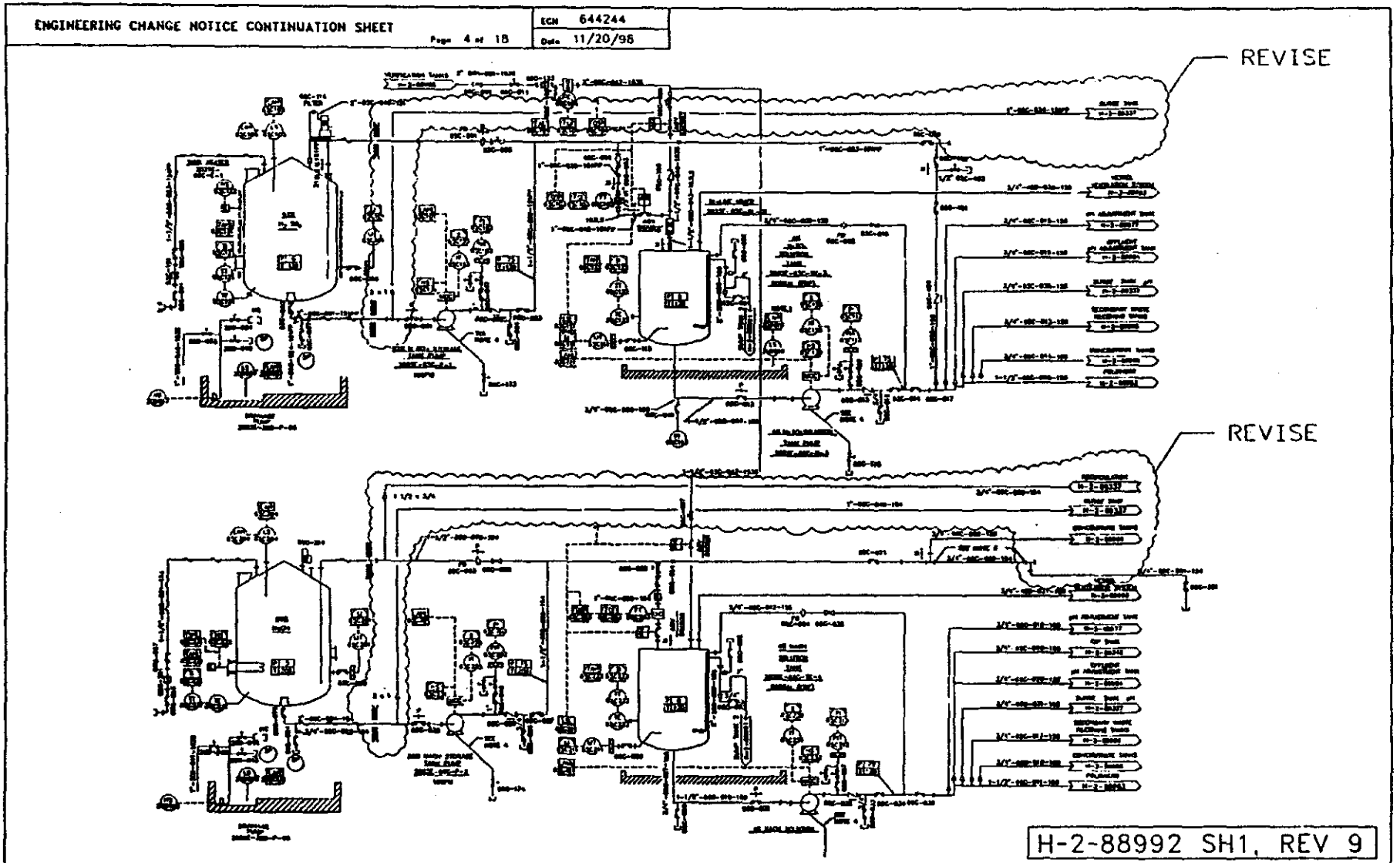
8) H-2-89047 SH 2, REV 0
Add DETAIL F as shown on page 18

ENGINEERING CHANGE NOTICE CONTINUATION SHEET

Page 4 of 18

ECN 644244

Date 11/20/98



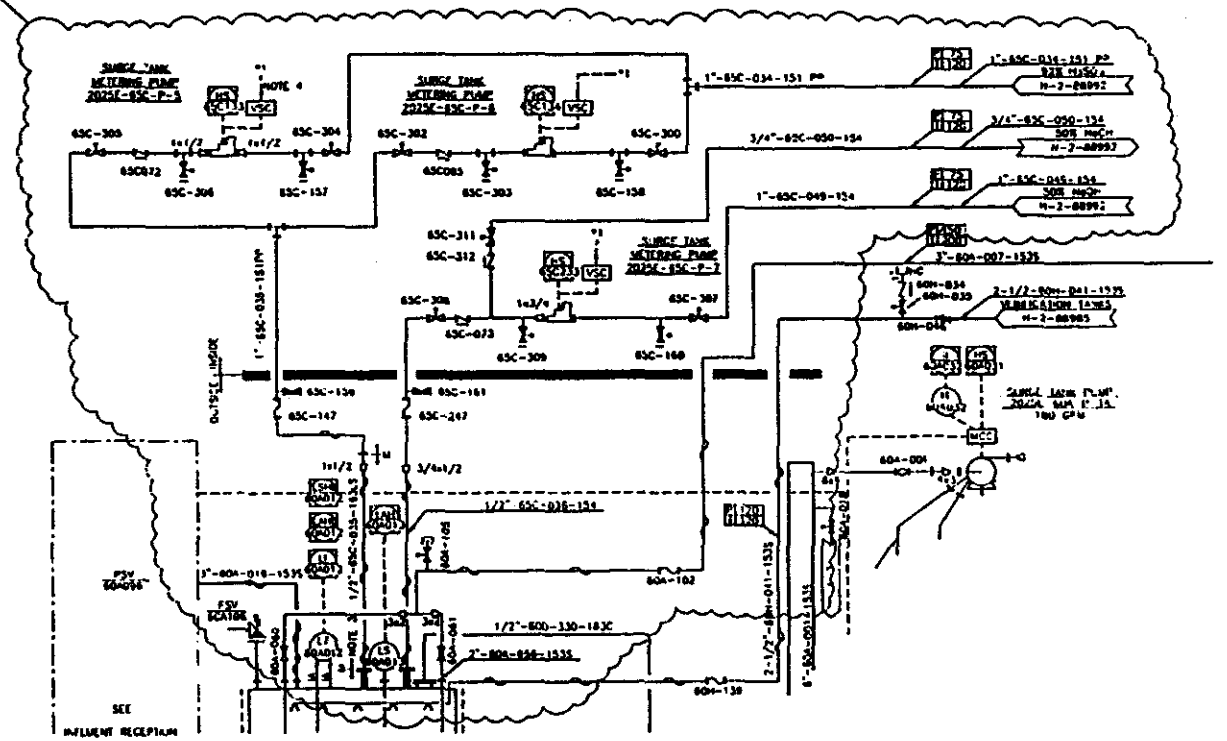
ENGINEERING CHANGE NOTICE CONTINUATION SHEET

Page 5 of 16

ECN 644244

Date 11/20/98

REVISE



ZONE: E/F 6/7

H-2-89337 SH1, REV 10

A-7900-013-4 (04/94) GLF004 ECNCS

1
2
3
4
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6

APPENDIX 4A

DETAILED DRAWINGS FOR THE LIQUID EFFLUENT RETENTION FACILITY

Drawings of the containment systems at the LERF are summarized in Table 4A-1. Because the failure of these containment systems at LERF could lead to the release of dangerous waste into the environment, Engineering Change Notices (ECNs) which affect these containment systems will be submitted to the Washington State Department of Ecology, as a Class 1, 2, or 3 permit modification, as required by WAC 173-303-830.

Table 4A-1. Liquid Effluent Retention Facility Containment System.

LERF System	Drawing Number	Outstanding ECNs	Drawing Title
Bottom Liner	H-2-79590, Sh 1, Rev. 3	None	Civil Plan, Sections and Details; Cell Basin Bottom Liner (Sheet 1)
Top Liner	H-2-79591, Sh 1, Rev. 3	None	Civil Plan, Sections and Details; Cell Basin Bottom Liner (Sheet 1)
Catch Basin	H-2-79593, Sh 1, Rev. 4	None	Civil Plan, Section and Details; Catch Basin (Sheet 1)

P&ID - piping and instrumentation diagram.

The drawings identified in Table 4A-2 illustrate the piping and instrumentation configuration within LERF, and of the transfer piping systems between the LERF and the 242-A Evaporator. These drawings are provided for general information and to demonstrate the adequacy of the design of the LERF as a surface impoundment. An update to these drawings and drawings identified in Table 4A-1 will be provided annually to the Washington State Department of Ecology.

Table 4A-2. Liquid Effluent Retention Facility Piping and Instrumentation.

LERF System	Drawing Number	Outstanding ECNs	Drawing Title
Transfer Piping to 242-A Evaporator	H-2-79604, Sh 1,Rev. 3	ECN-648330	Piping Plot and Key Plans; 242-A Evaporator Condensate Stream (Sheet 1)
LERF Piping and Instrumentation	H-2-88766, Sh 1, Rev. 3	ECN-648330 ECN-656789	P&ID; LERF Basin and ETF Influent (Sheet 1)
LERF Piping and Instrumentation	H-2-88766, Sh 2, Rev. 5	ECN-647209L ECN-648330	P&ID; LERF Basin and ETF Influent (Sheet 2)
LERF Piping and Instrumentation	H-2-88766, Sh 3, Rev. 6	ECN-648330 ECN-709380L	P&ID; LERF Basin and ETF Influent (Sheet 3)
LERF Piping and Instrumentation	H-2-88766, Sh 4, Rev. 6	ECN-648330 ECN-658584	P&ID; LERF Basin and ETF Influent (Sheet 4)
	H-2-89351, Sh 1, Rev. 7	None	Piping & Instrumentation Diagram - Legend

P&ID - piping and instrumentation diagram.

APPENDIX 4A

DETAILED DRAWINGS FOR THE LIQUID EFFLUENT RETENTION FACILITY

Outstanding ECNs

S

ORIGINAL

cff 13b

ENGINEERING CHANGE NOTICE

ESSENTIAL

1. ECN 648330

Proj. ECN

2. ECN Category (mark one) Supplemental (●) Direct Revision ( ) Change ECN ( ) Temporary ( ) Standby ( ) Supersedure ( ) Cancel/Void ( )	3. Originator's Name, Organization, MSIN, and Telephone No. MA Przybylski, FFS, S5-50, 376-4017	4. USQ Required? ( ) Yes (●) No	5. Date 10/13/2000
	6. Project Title/No./Work Order No. Site/Utility Systems TWRS Privatization Phase I	7. Bldg./Sys./Fac. No. 242-AL/60M	8. Approval Designator T, E
	9. Document Numbers Changed by this ECN (includes sheet no. and rev.) See Block 13a Below	10. Related ECN No(s). N/A	11. Related PO No. N/A
12a. Modification Work (●) Yes (fill out Blk. 12b) ( ) No (NA Blks. 12b, 12c, 12d)	12b. Work Package No. EL-00-00209	12c. Modification Work Completed Design Authority/Cog. Engineer Signature & Date	12d. Restored to Original Condition (Temp. or Standby ECNs only) N/A Design Authority/Cog. Engineer Signature & Date

13a. Description of Change

13b. Design Baseline Document? (●) Yes ( ) No

- H-2-88766 sh1, rev.3; revise as shown on page 5.
- H-2-88766 sh2, rev.5; revise as shown on page 6.
- H-2-88766 sh3, rev.6; revise as shown on page 7.
- H-2-88766 sh4, rev.6; revise as shown on page 8.
- H-2-88766 sh5, rev.0; Page 9 of this ECN supercedes Sh 5, Rev 0 of H-2-88766 in its entirety. Appropriate changes shown on page 9.
- H-2-88815 sh5, rev.2; revise as shown on page 10.

H-2-88818 sh2, rev.0; add elementary ladder rungs 38 thru 44, as shown on page 11.

H-2-88836 sh3, rev.1; add termination wiring as shown on page 11.

SEE PAGE 3 FOR CONTINUATION OF BLOCK 13a.

14a. Justification (mark one)	14b. Justification Details
Criteria Change ( ) Design Improvement ( ) Environmental ( ) Facility Deactivation ( ) As-Found ( ) Facilitate Const. (●) Const. Error/Omission ( ) Design Error/Omission ( )	This ECN identifies all modifications to the existing LERF/ETF essential drawings caused by W519 tie ins.

15. Distribution (include name, MSIN, and no. of copies)

NHC Files	G3-11	TDC	E6-02	BA Messinger	B4-39
RJ Parazin	S5-09	OCL/FILE	S5-09	JM Isdell	B4-39
ML Alexander	E6-27	Project Records	R1-29	JB Benton*	S6-72
MA Friedrich	G3-15	JM Neville	G3-11	MJ Brown*	S6-72
MA Haq	B4-39	SJ Lepka	S5-09	* Advanced Copy	
JL Henderson	G3-11	NJ Sullivan	S6-72		
JJ Huston	B4-68	LL Lin*	S6-72		
MA Przybylski*	S5-50	MM Towne*	S6-74		

RELEASE STAMP

OCT 31 2000

DATE: HANFORD

STA: 30 RELEASE

ID: 18

A-7900-013-2 (10/97)

A-7900-013-1

ORIGINAL

ENGINEERING CHANGE NOTICE

1. ECN (use no. from pg. 1): 648330

16. Design Verification Required	17. Cost Impact		18. Schedule Impact (days)
	ENGINEERING	CONSTRUCTION	
⊗ Yes	Additional ○ $ _____	Additional ○ $ N/A	Improvement ○ N/A
○ No	Savings ○ $ _____	Savings ○ $ N/A	Delay ○ N/A

19. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 13. Enter the affected document number in Block 20.

SDD/DD	☐	Seismic/Stress Analysis	☐	Tank Calibration Manual	☐
Functional Design Criteria	☐	Stress/Design Report	☐	Health Physics Procedure	☐
Operating Specification	☐	Interface Control Drawing	☐	Spares Multiple Unit Listing	☐
Criticality Specification	☐	Calibration Procedure	☒	Test Procedures/Specification	☐
Conceptual Design Report	☐	Installation Procedure	☐	Component Index	☒
Equipment Spec.	☐	Maintenance Procedure	☒	ASME Coded Item	☐
Const. Spec.	☐	Engineering Procedure	☐	Human Factor Consideration	☐
Procurement Spec.	☐	Operating Instruction	☐	Computer Software	☒
Vendor Information	☒	Operating Procedure	☒	Electric Circuit Schedule	☐
OM Manual	☐	Operational Safety Requirement	☐	ICRS Procedure	☐
FSAR/SAR	☐	IEFD Drawing	☐	Process Control Manual/Plan	☐
Safety Equipment List	☐	Cell Arrangement Drawing	☐	Process Flow Chart	☐
Radiation Work Permit	☐	Essential Material Specification	☐	Purchase Requisition	☐
Environmental Impact Statement	☐	Fac. Proc. Samp. Schedule	☐	Tickler File	☐
Environmental Report	☐	Inspection Plan	☐	~~N/A~~ 222	☒
Environmental Permit	☐	Inventory Adjustment Request	☒		☐

20. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

Document Number/Revision	Document Number/Revision	Document Number/Revision
~~See Page 3 and 4 for Other~~ 10/31/00		
~~Affected Documents.~~		
POP-60M-001, POP-60M-003, ARP-60M-001, HNF-SD-TEF-ARR-002		

21. Approvals

	Signature	Date		Signature	Date
Design Authority	(INFORMAL REVIEW)	10-31-00	Design Agent	MA Payzyloski	10/25/00
Cog. Eng.			PE		
Cog. Mgr.	NJ Russell	10-31-00	QA		
QA			Safety		
Safety			Design		
Environ.		10-31-00	Environ.		
Other			Other		
~~PDF~~ Cog Eng	MS Brown	10/24/00			
	HB Burton	10/31/00	DEPARTMENT OF ENERGY		
	CM Tame	10/31/00	Signature or a Control Number that tracks the Approval Signature		
			ADDITIONAL		

A-7900-013-3 (10/97)

13a.CONTINUATION:

H-2-79668 sh5, rev.6; add additional heat trace loads to elementary diagrams as shown on page 12.

H-2-85323 sh1, rev.0; add panelboard A as shown on page 13.

H-2-85323 sh3, rev.2; revise as shown on page 14.

H-2-85323 sh4, rev.4; revise as shown on page 15.

H-2-85323 sh5, rev.2; revise as shown on page 16.

H-2-85323 sh8, rev.0; add new sheet 8 as shown on page 17.

ZM 10/26/00

~~Block 20+~~ Other Affected Documents:

H-2-79604,sh1 / Rev 3 / This drawing is modified by project W519, drawing H-2-830093, sh 1.

H-13-000198, sh 1 / Rev 1 / & sh 2 / Rev 1 / These drawings are modified by project W519, drawing H-2-830093.

H-13-000198, sh 3 / Rev 1 / Add the following pipelines to drawing. Also see this ECN (648330) for pipeline information.
4"-WTP-001-M17, 3"-WTP-002-M17, 4"-80W-001-M17, 4"-80W-002-M17
4"-80W-003-M17, 4"-80W-004-M17, 4"-80W-005-M17

H-2-79609 sh 1 / Rev 3 / This drawing is modified by project W519, drawings H-2-830095, sh 1, H-2-830096, sh 1 and H-2-830097, sh 1. The 3"-WTP-002-M17 line ties into the PC5000 line at N41804.7, W47070 at STA 1+357.1 (Zone D-5).

H-2-79610 sh 1 / Rev 3 / This drawing is modified by project W519, drawings H-2-830097 sh 1 and H-2-830098 sh 1.

H-2-79613 sh 1 / Rev 4 / This drawing is modified by project W519, drawing H-2-830099, sh 1-3.

H-2-79614 sh 1 / Rev 4 / This drawing is modified by project W519, drawing H-2-830100, sh 1-3.

H-2-79615 sh 1 / Rev 4 / This drawing is modified by project W519, drawing H-2-830101, sh 1-3.

H-2-88738, sh 1 / Rev 1 / & sh 2 / Rev 1 / Modified by project W519.
See drawings H-2-830105 through H-2-830109 for changes.

H-2-88810, sh 1 / Rev 1 / sh 2 / Rev. 1 / sh 3 / Rev 1 / sh 4 / Rev 0 / Modified by project W519. See drawings H-2-830105 through H-2-830109 for changes.

10/31/00

H-2-88813, sh 1 / Rev 1 / & sh 2 / Rev 1 / ~~sh 4 / Rev 0~~ / Modified by project W519.
See drawings H-2-830105 through H-2-830109 for changes.

H-2-88817, sh 1 / Rev 2 / Modified by project W519. See drawings H-2-830105 through H-2-830109 for changes.

H-2-88818, sh 2 / Rev 0 / Modified by project W519. See drawings H-2-830105 through H-2-830109 for changes.

Block 20: Other Affected Documents (Cont'd):

H-2-88836, sh 3 / Rev 1 / Modified by project W519. See drawings H-2-830105 through H-2-830109 for changes.

H-2-140321, Sh 1 / Rev 1 / Modified by project W519. See drawings H-2-830093 for project drawing listing.

H-2-140323, Sh 1 / Rev 1 / Modified by project W519. See drawings H-2-830093 for project drawing listing.

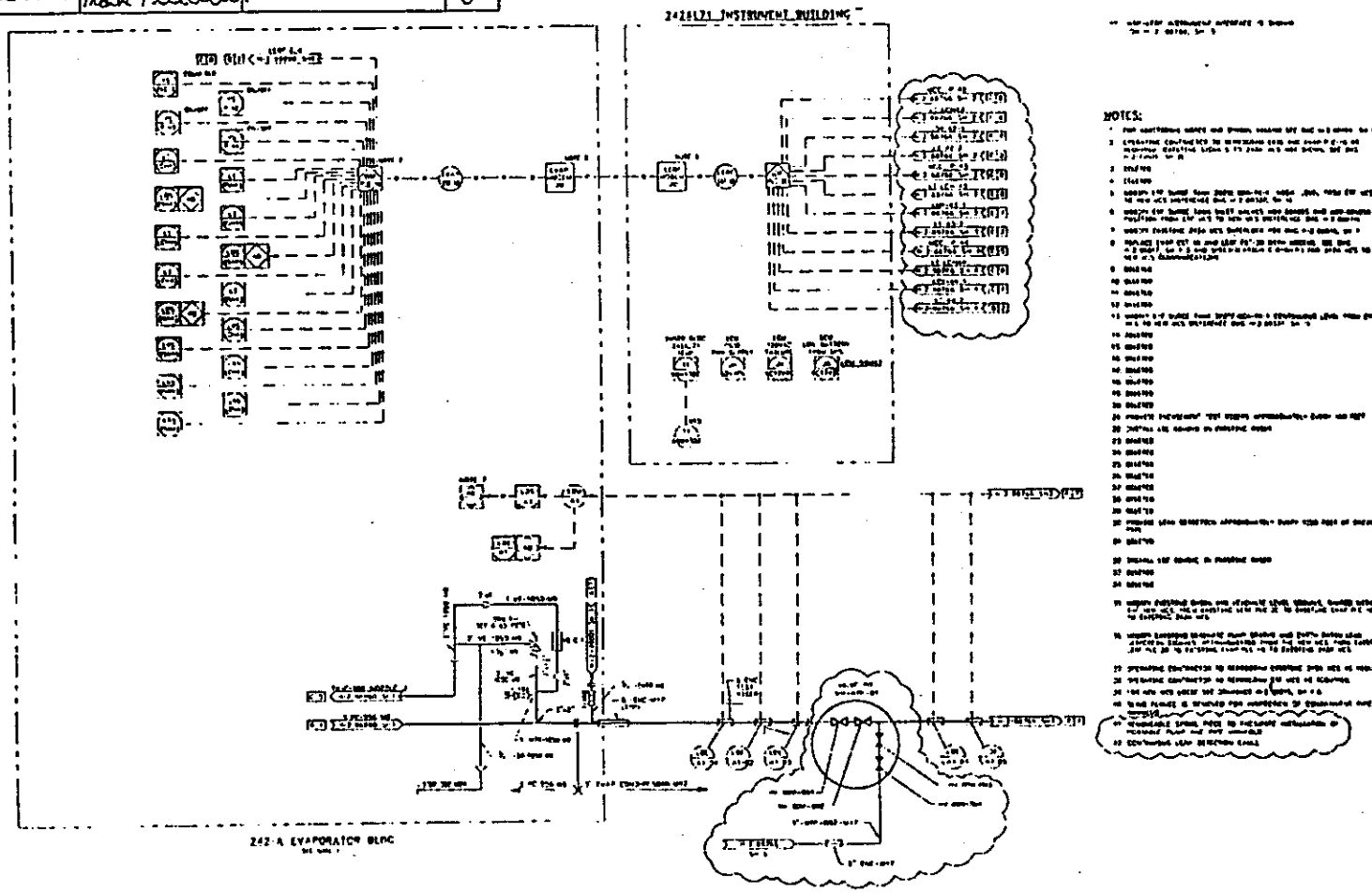
H-2-140342, Sh 1 / Rev 2 / Modified by project W519. See drawings H-2-830093 for project drawing listing. The "J" line ties into the "H" line at N42281.5, W47238.6 at station 1+444.5.

H-2-140377, Sh 1 / Rev 1 / Modified by project W519. See drawings H-2-830093 for project drawing listing.

FLUOR FEDERAL SERVICES			ENGINEERING CHANGE NOTICE SKETCH			
Ref Dwg	Sh	Rev	Prepared By	Checked By	ECN No	Page
H-2-88766	1	3	CL UHLMAN	Mark Finedine	648330	5

1 MODIFY H-2-88766 SHEET 1 AS SHOWN IN CIRCLED AREA

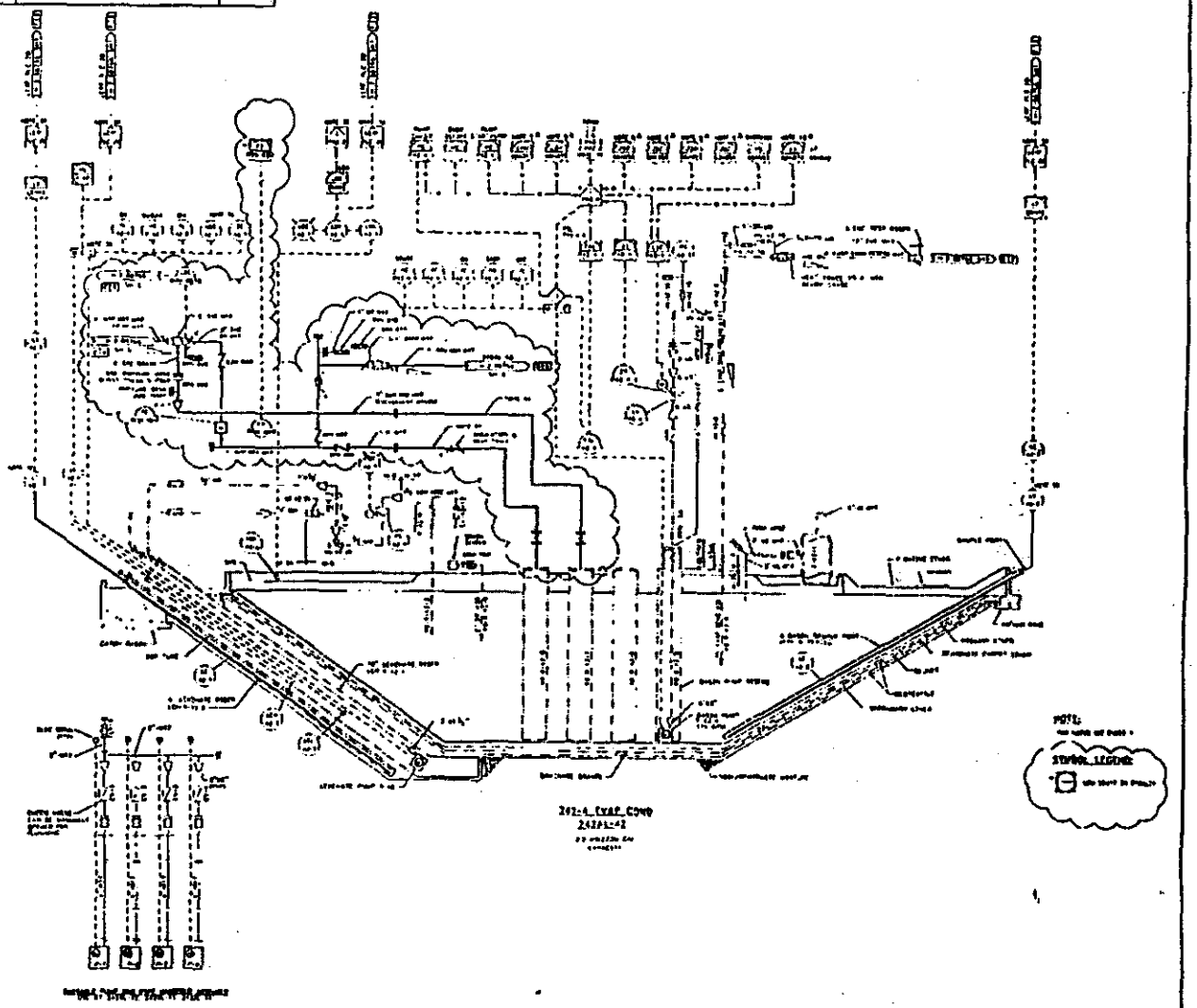
2 REVISE DRAWING TITLE. "242-A - LERF INTERFACE"



NOTES:

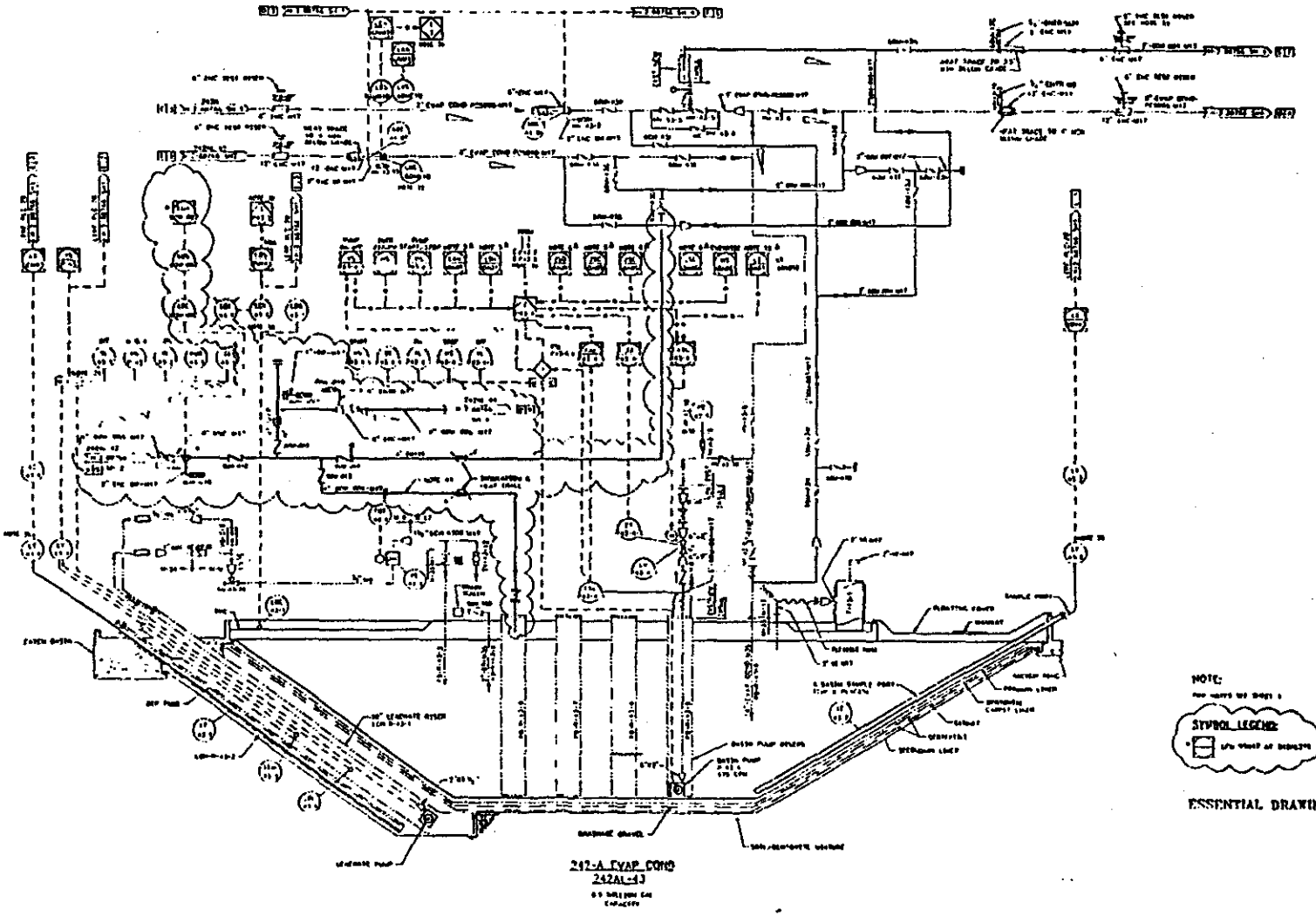
FLUOR FEDERAL SERVICES			ENGINEERING CHANGE NOTICE SKETCH			
Hat Dwg	Sh	Rev	Prepared By	Checked By	ECN No	Page
H-2-88766	2	5	CL UHLMAN	Mark Fiedler	648330	6

ADD TO DRAWING H-2-88766 SH 2 THE ITEMS IN THE CLOUDED AREA



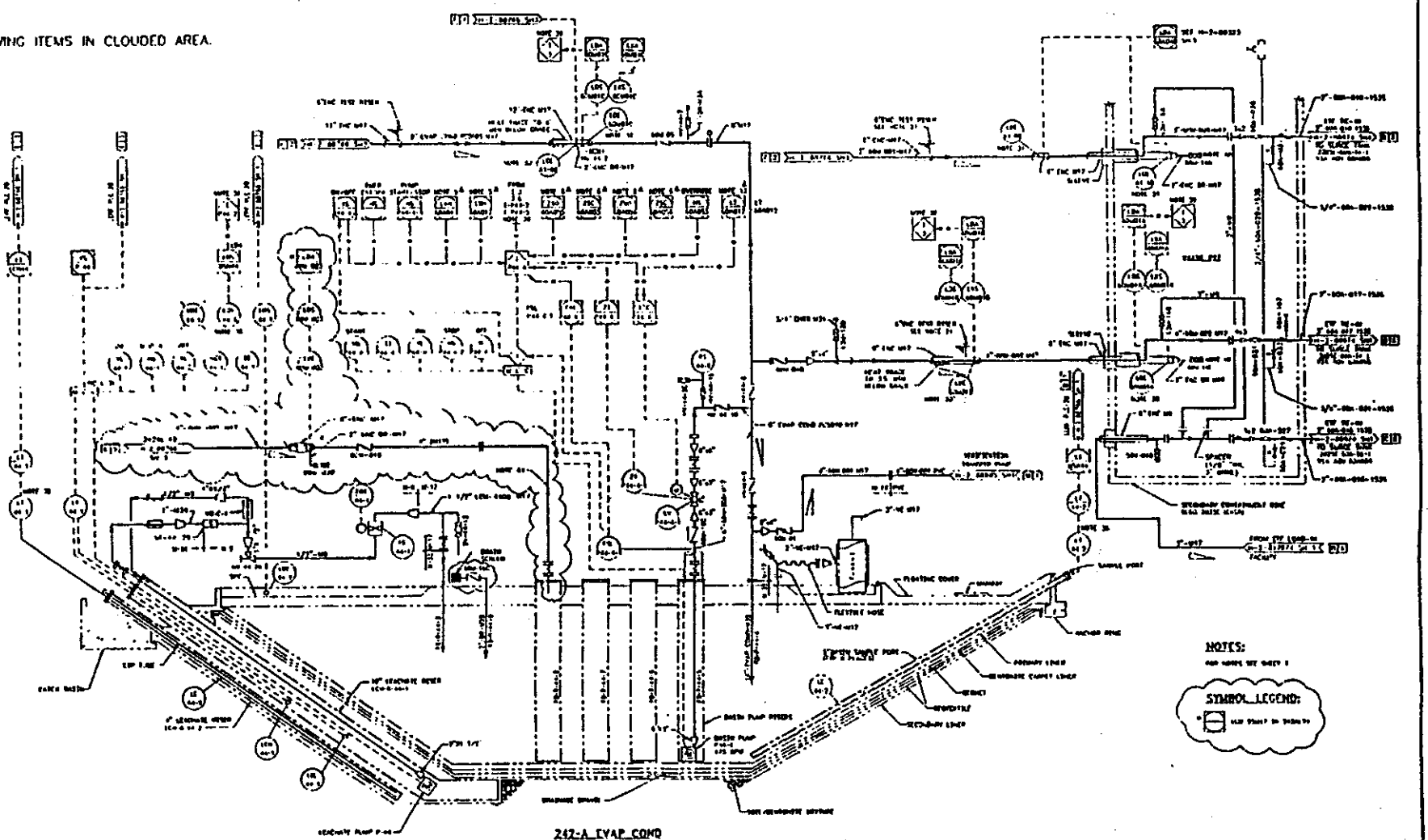
FLUOR FEDERAL SERVICES			ENGINEERING CHANGE NOTICE SKETCH			
Ref Dwg	Sh	Rev	Prepared By	Checked By	ECN No	Page
H-2-88766	3	6	CL UHLMAN	Mark Fiedler	648330	17

ADD ITEMS IN CLOUDED AREA AS SHOWN



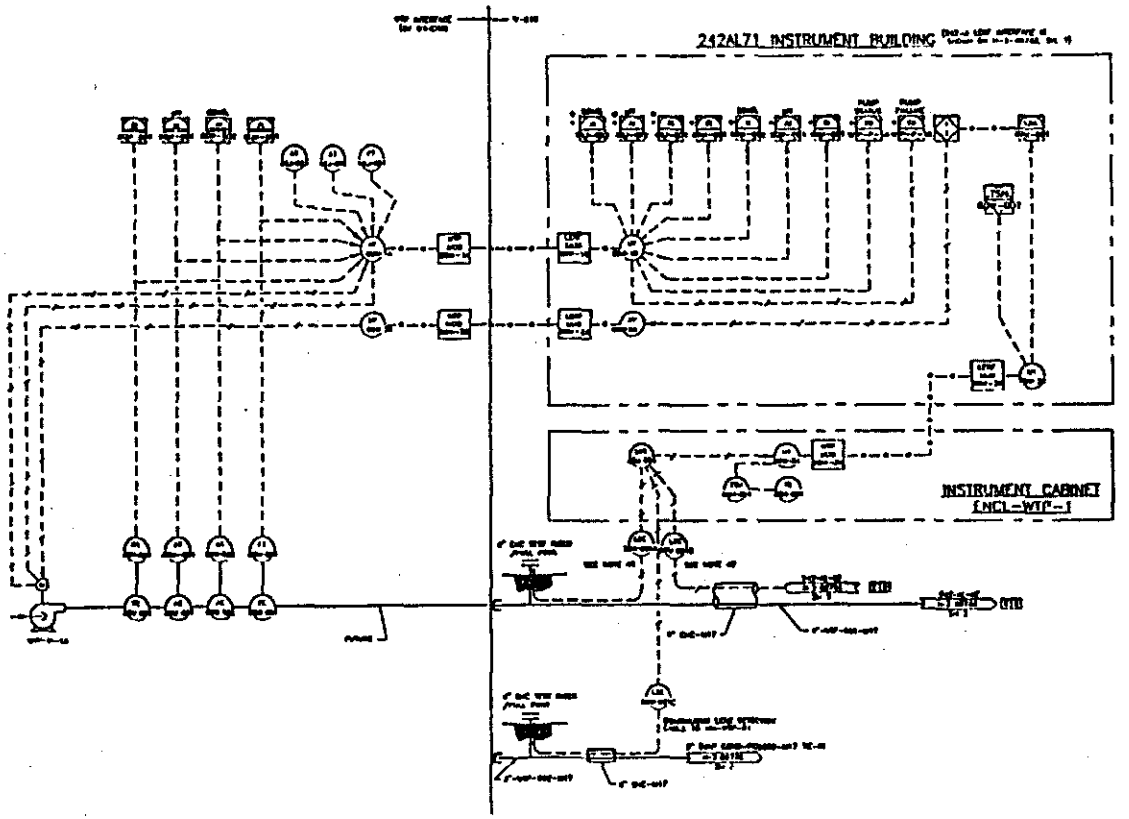
FLUOR FEDERAL SERVICES			ENGINEERING CHANGE NOTICE SKETCH			
Ref Dwg	SN	Rev	Prepared By	Checked By	ECN No	Page
F-2-88766	4	6	CL UHLMAN	Mak Friedrich	648330	8

ADD TO DRAWING ITEMS IN CLOUDED AREA.



FLUOR FEDERAL SERVICES	ENGINEERING CHANGE NOTICE SKETCH					
Ref Dwg	Sh	Rev	Prepared By	Checked By	ECN No	Page
H-2-88766	5	0	CL UHLMAN	Mark Fiedler	648330	9

1. SUPERSEDES H-2-88766, SH. 5.
2. NEW DRAWING TITLE:
   P&ID, LERF-WTP INTERFACE



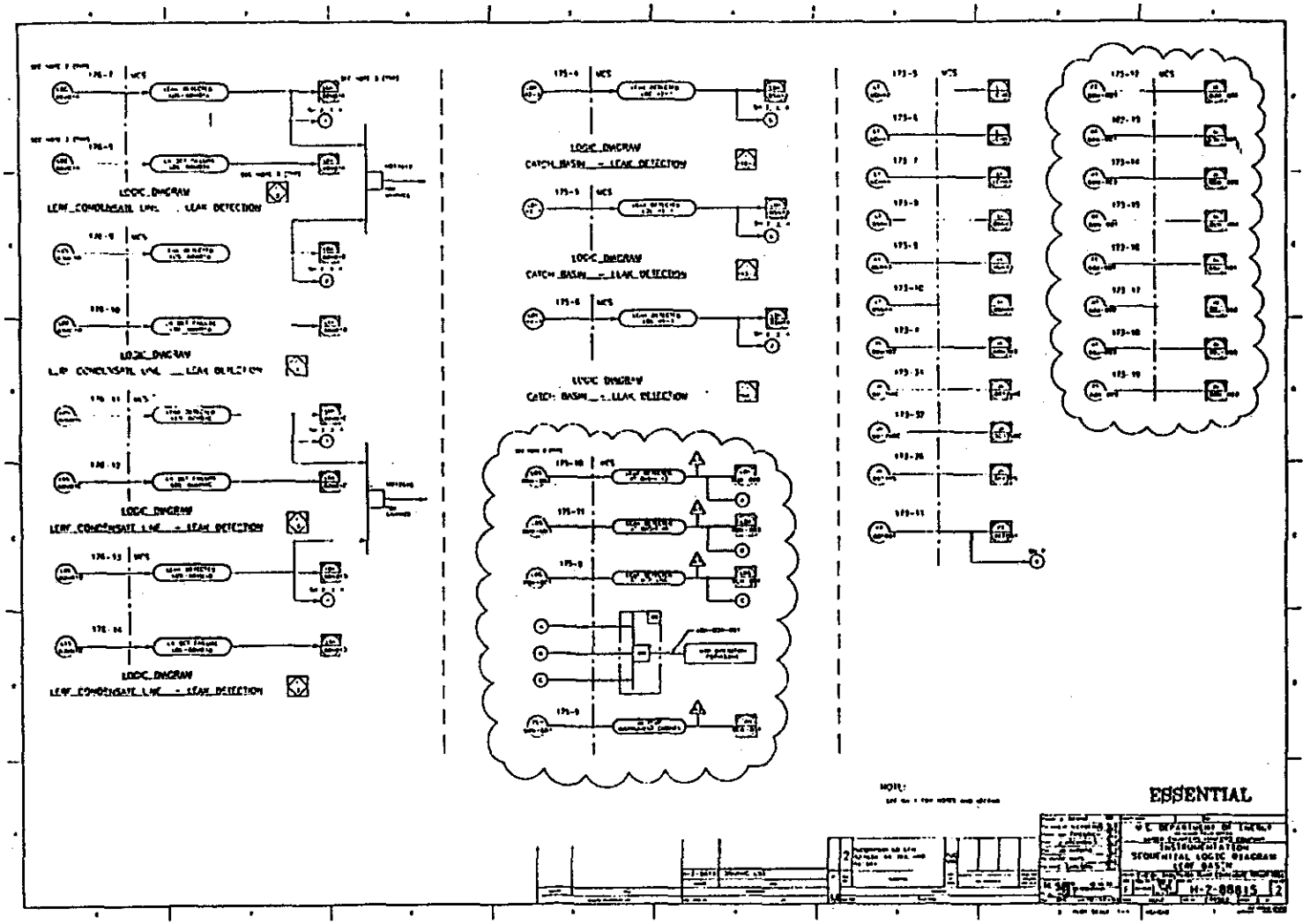
NOTE:

SYMBOL LEGEND

FLUOR FEDERAL SERVICES — ENGINEERING CHANGE NOTICE SKETCH

Ref Dwg	Sh	Rev	Prepared By	Checked By	ECN no	Page
H-2-88815	5	2	CL UHLMAN	Mark Fiedler	648330	10

ADD CLOUDED AREAS TO H-2-88815, (SHEET 5)

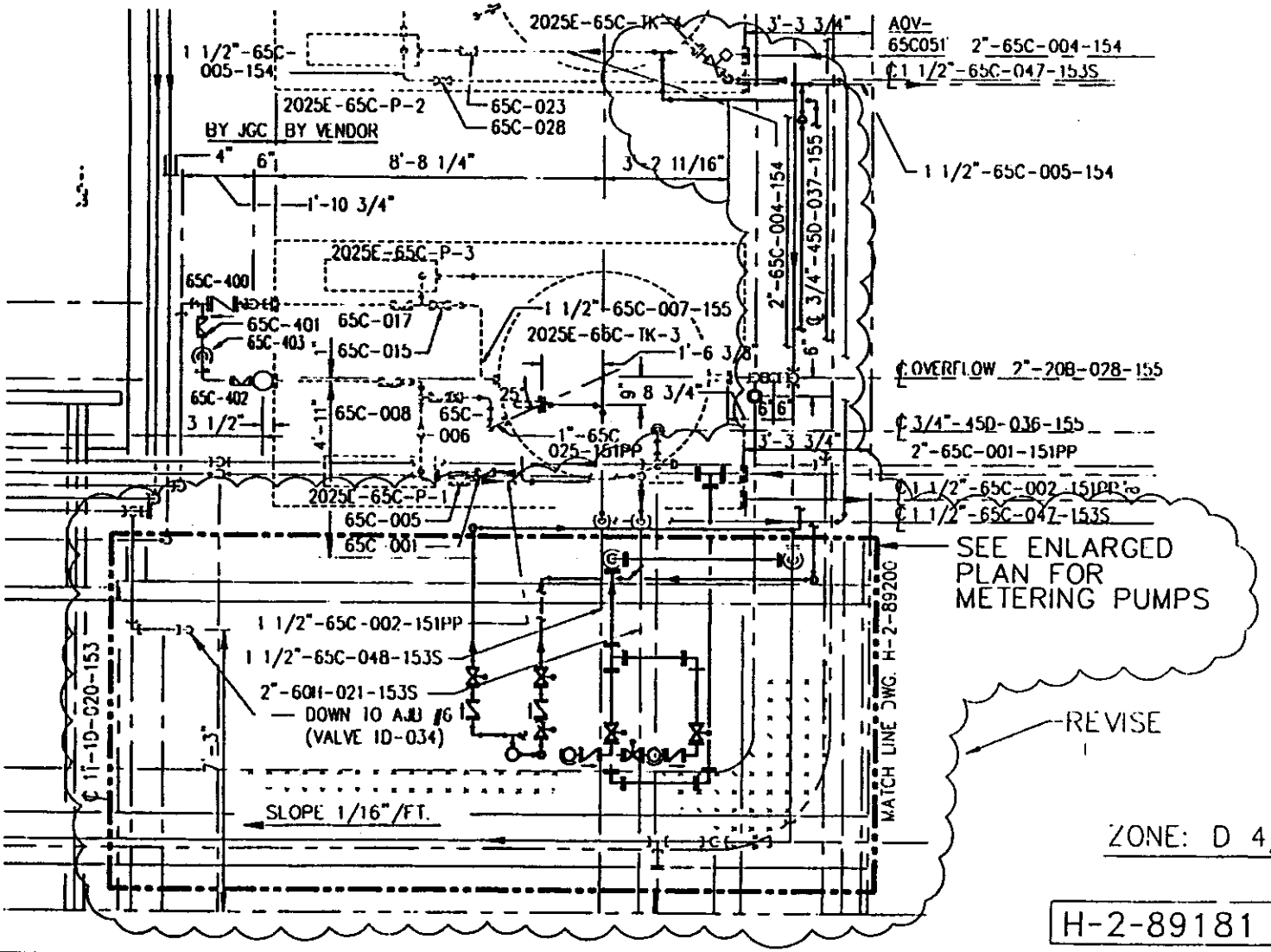


ENGINEERING CHANGE NOTICE CONTINUATION SHEET

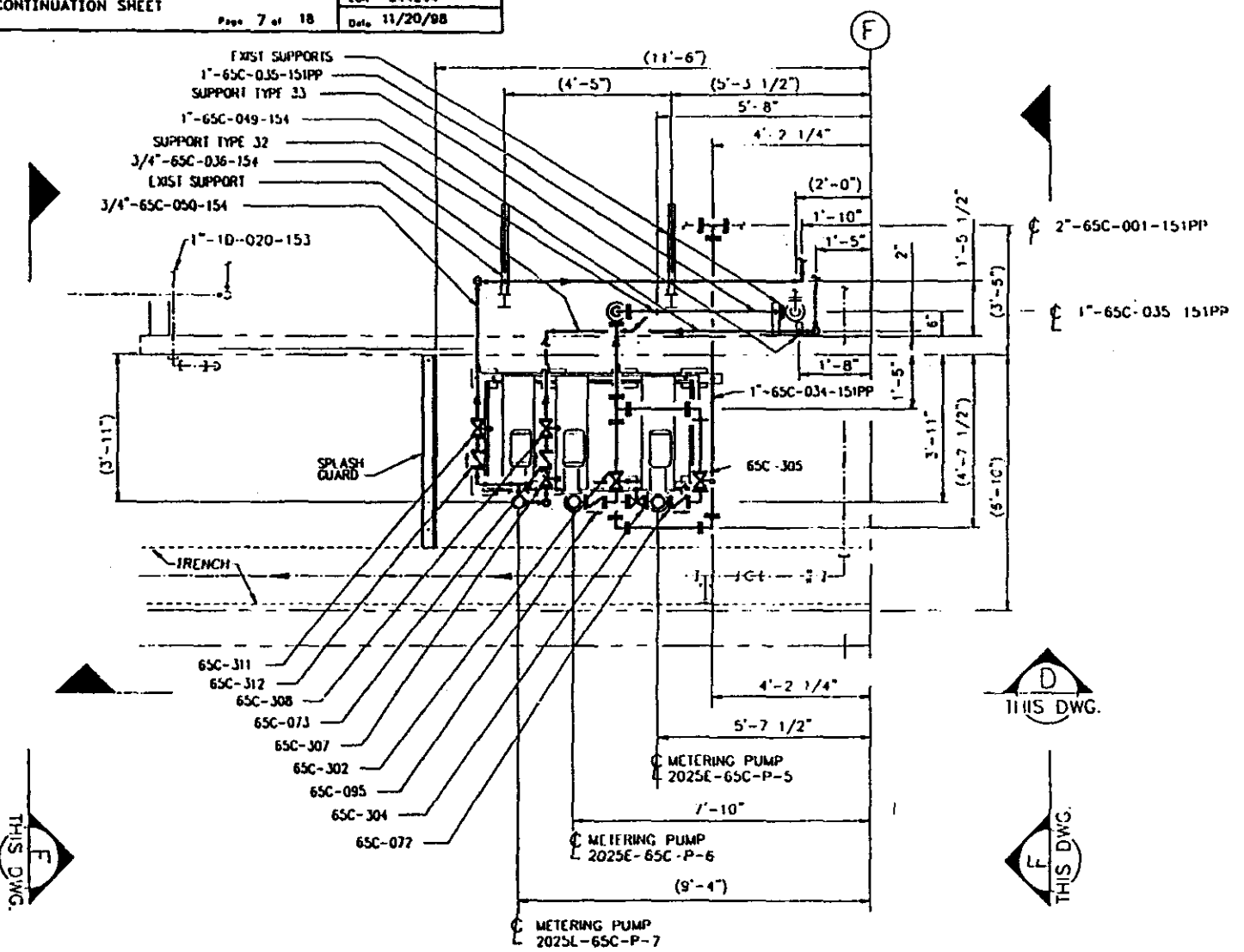
Page 6 of 18

ECN 644244

Date 11/20/98

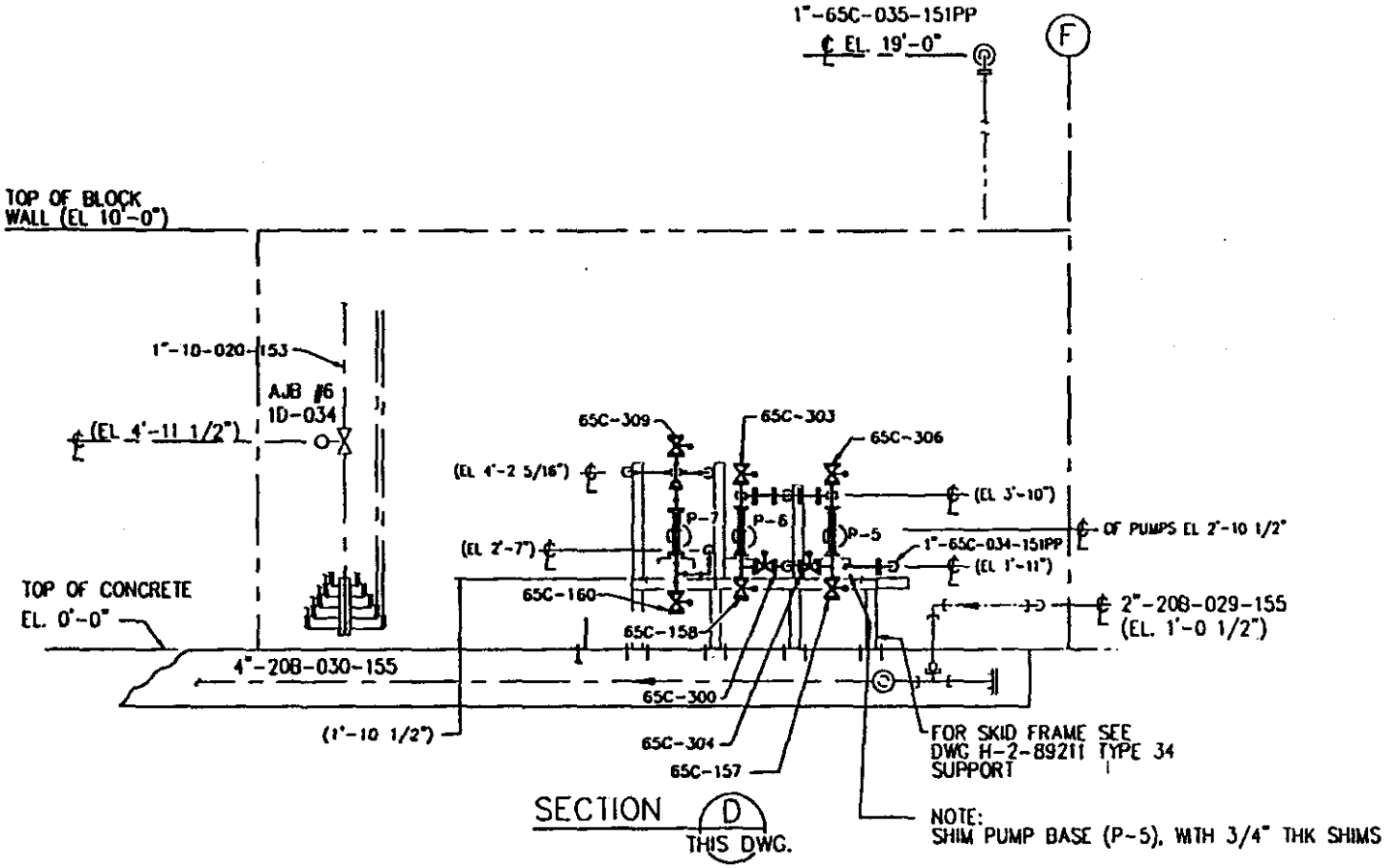


H-2-89181 SH1, REV 5

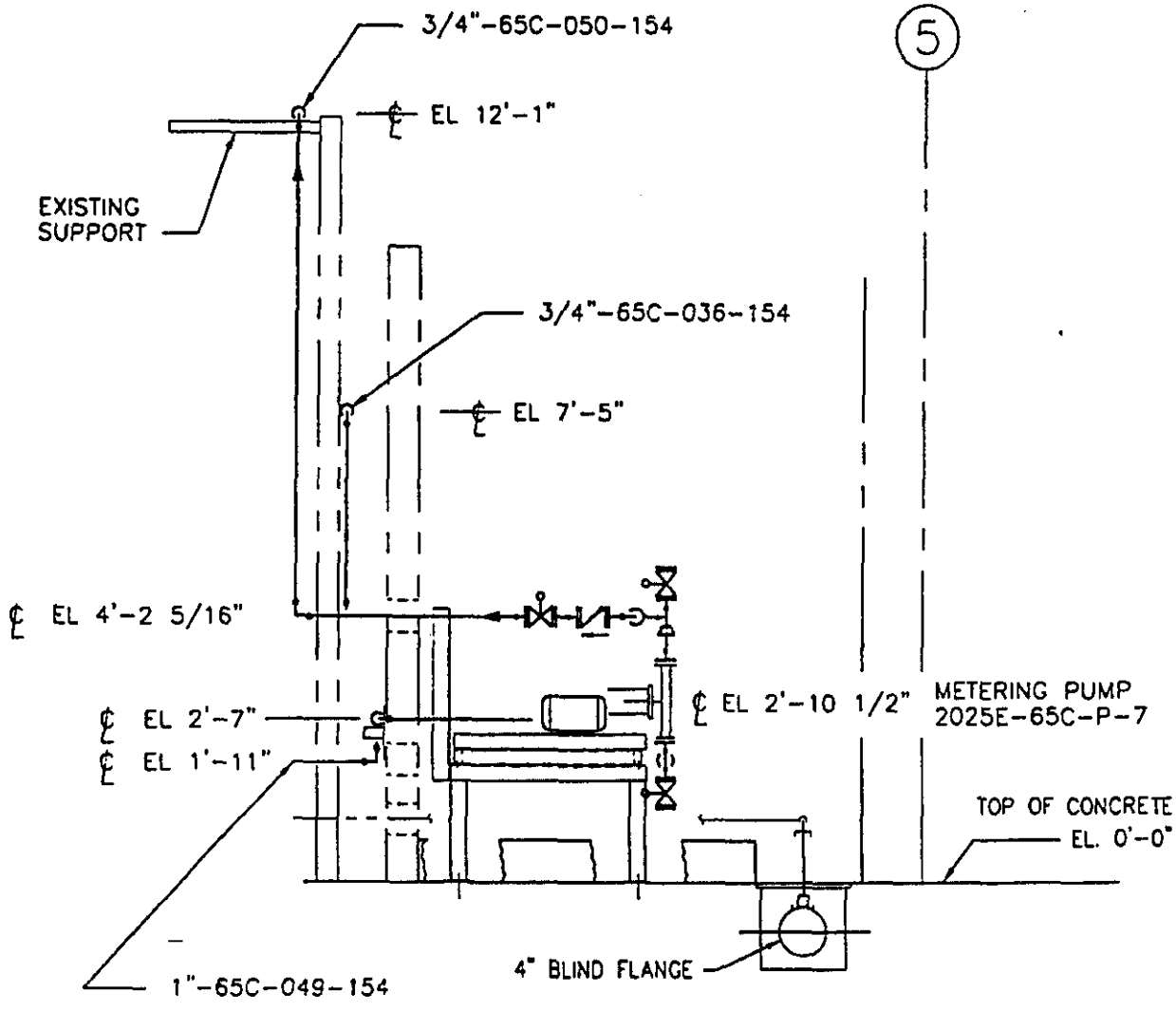


ENLARGED PLAN

H-2-89181 SH1, REV 5

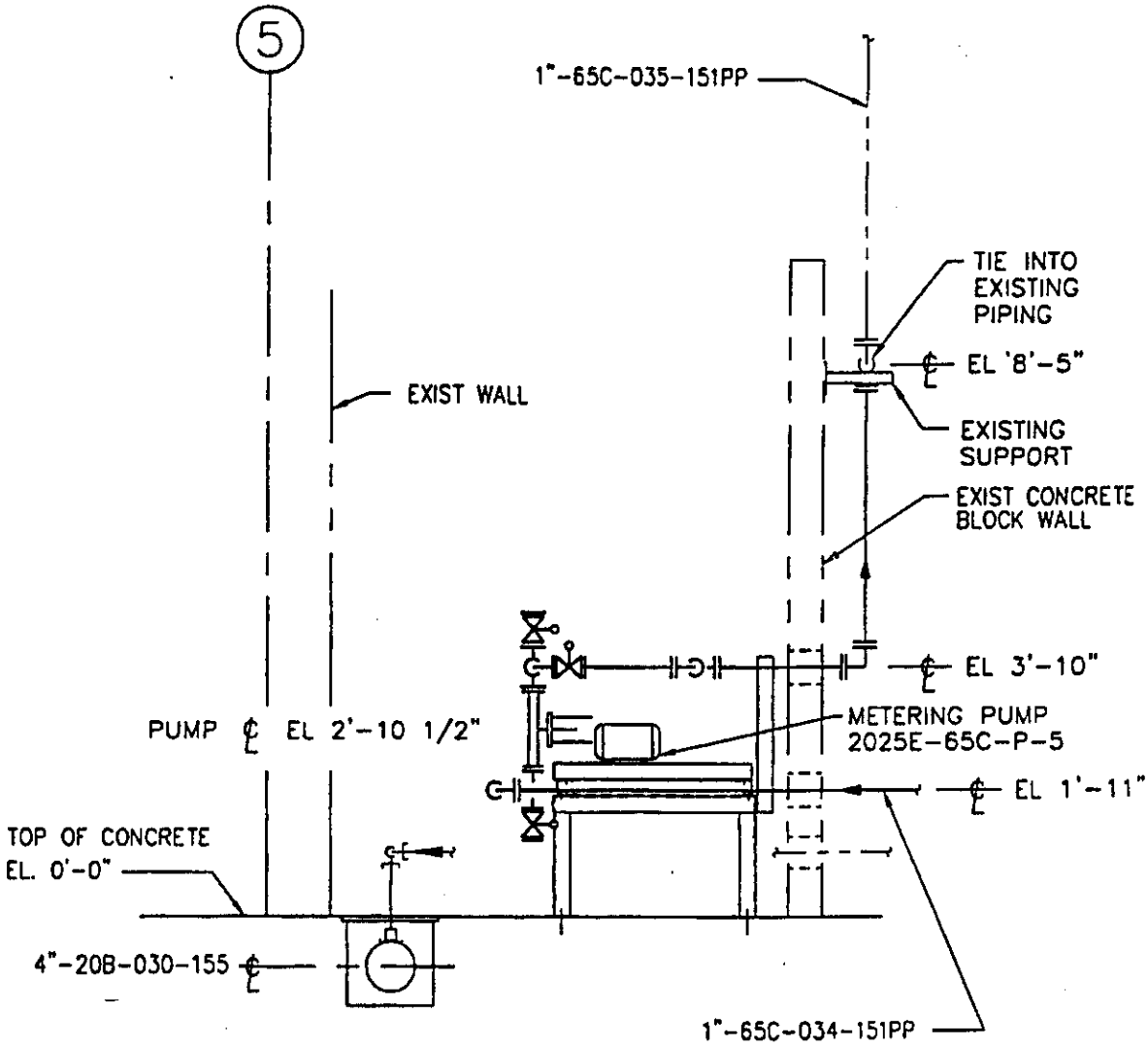


H-2-89181 SH1, REV 5



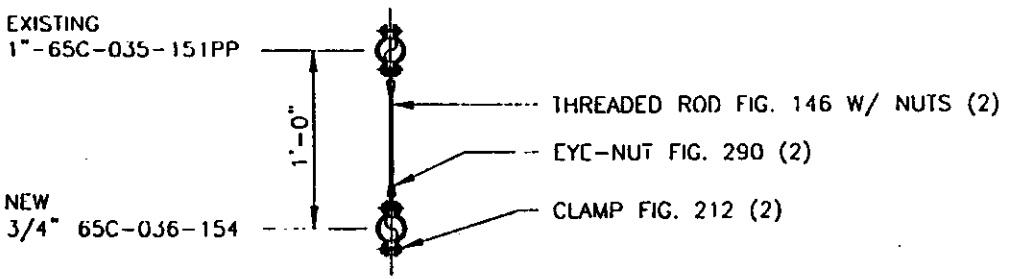
SECTION (E) THIS DWG.

H-2-89181 SH1, REV 5

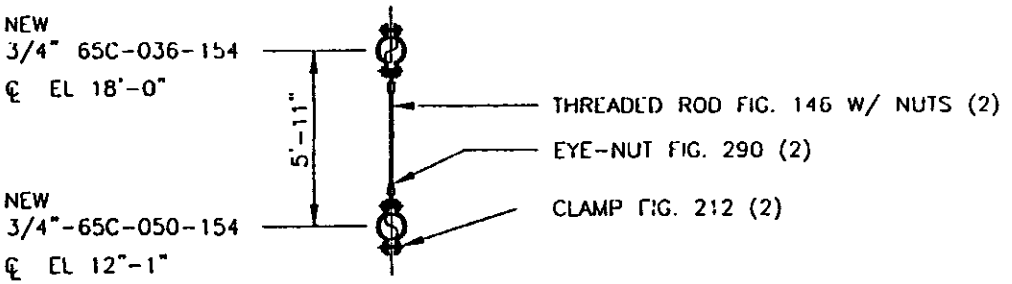


SECTION F
THIS DWG.

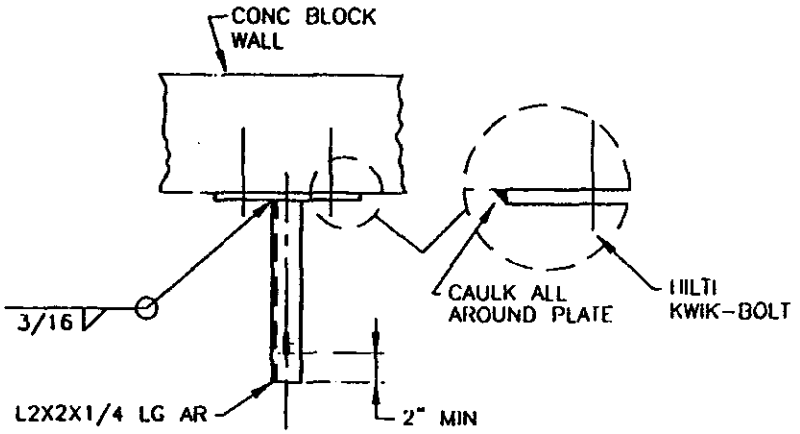
H-2-89181 SH1, REV 5

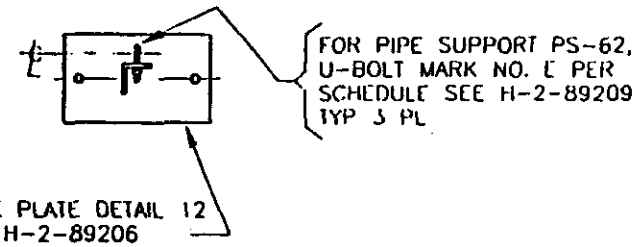


TYPE 32
(12 REQD)

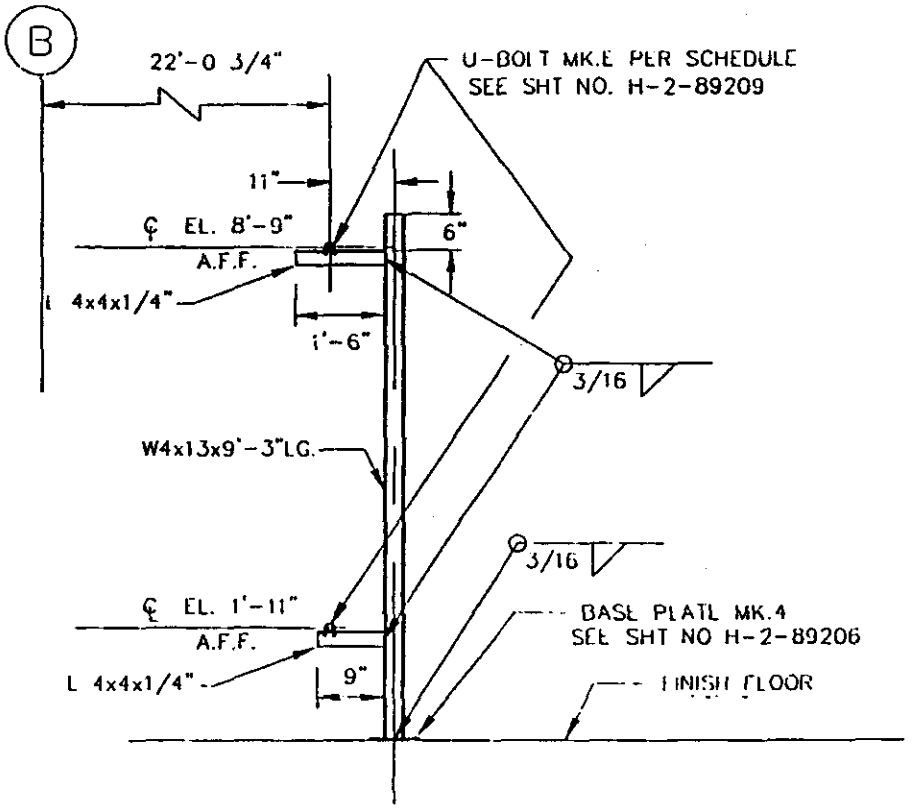


TYPE 35
(1 REQD)



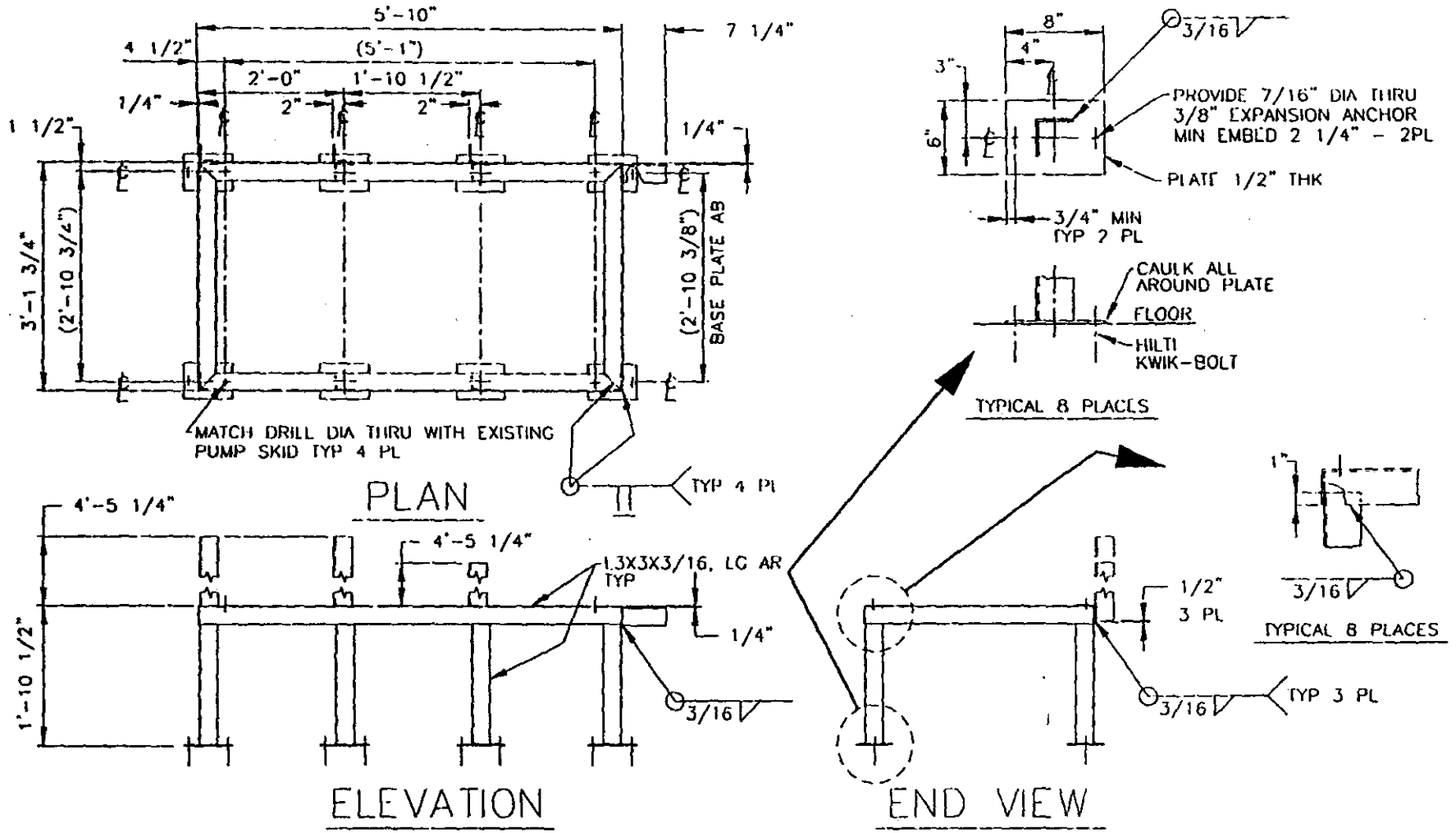


TYPE 33
(1 REQD)



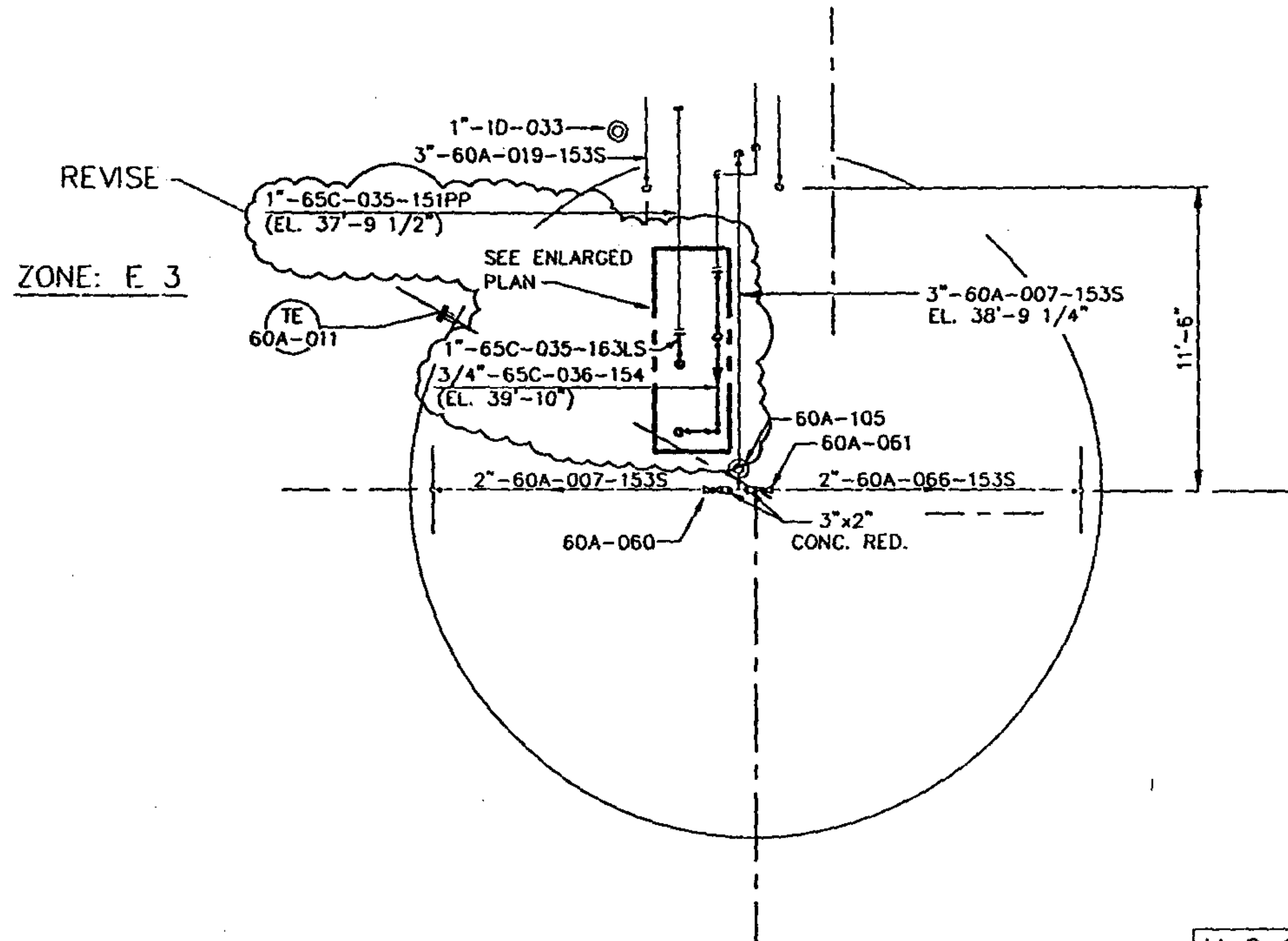
TYPE 26 (NON-TYPICAL)
ELEV. LKG. EAST
1/2" = 1'-0"

H-2-89211 SH1, REV 1

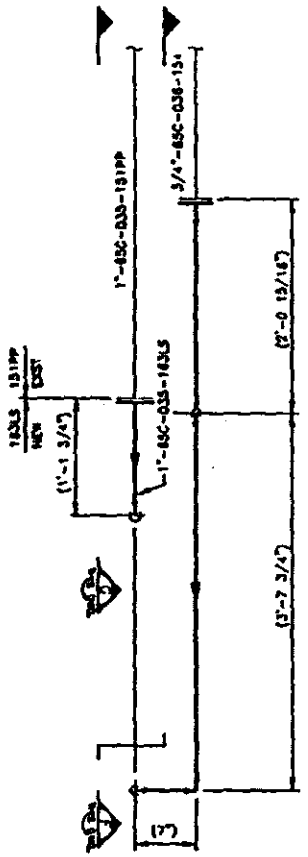


TYPE 34

H-2-89211 SH1, REV 1

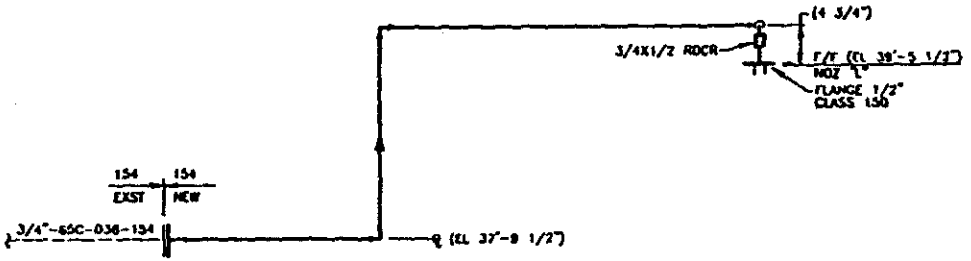


H-2-89200 SH1, REV 3

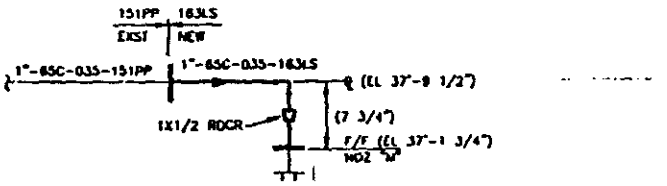


ENLARGED PLAN

NOTE:
FIELD VERIFY DIMENSIONS BEFORE FABRICATION

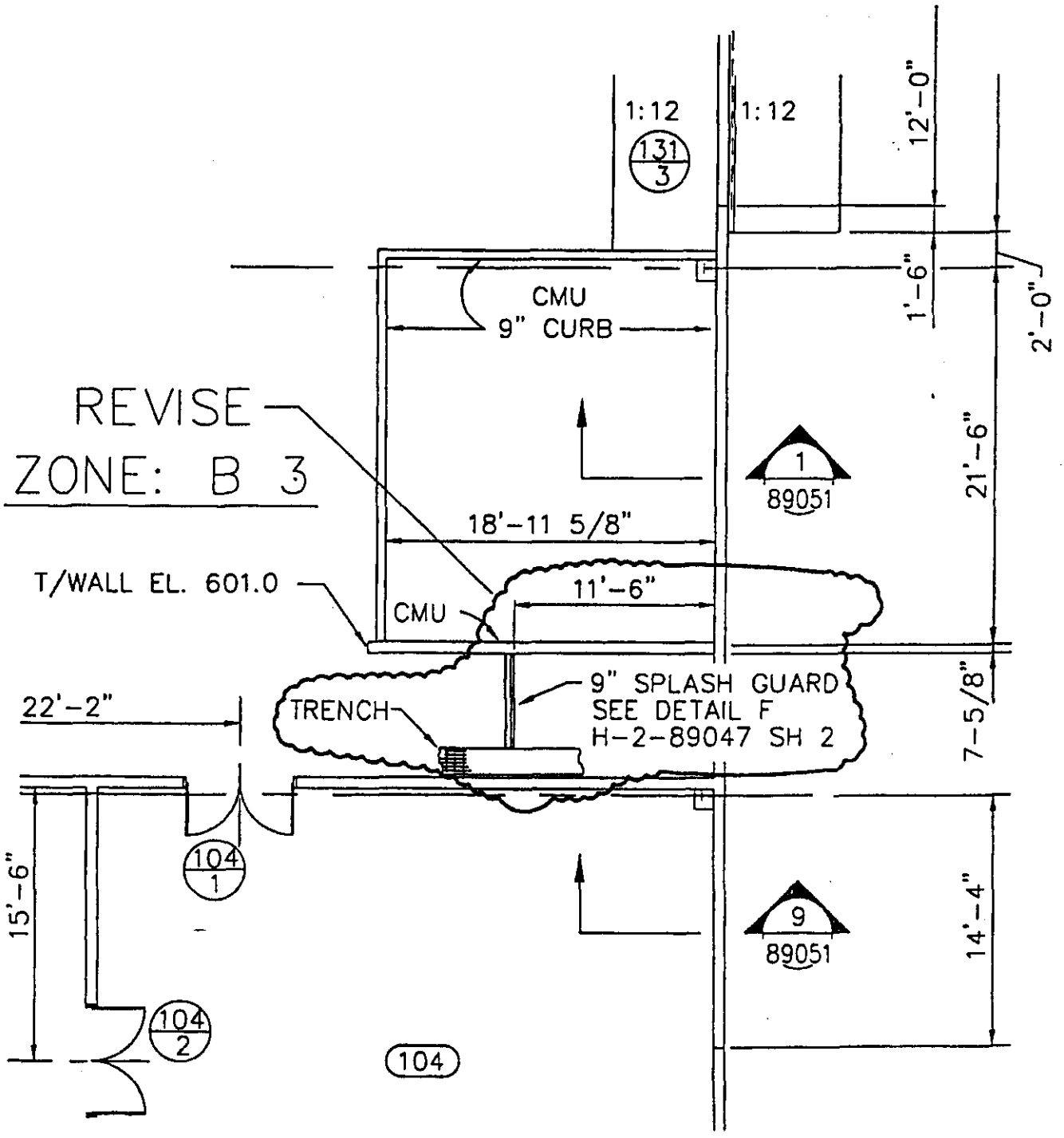


SECTION F

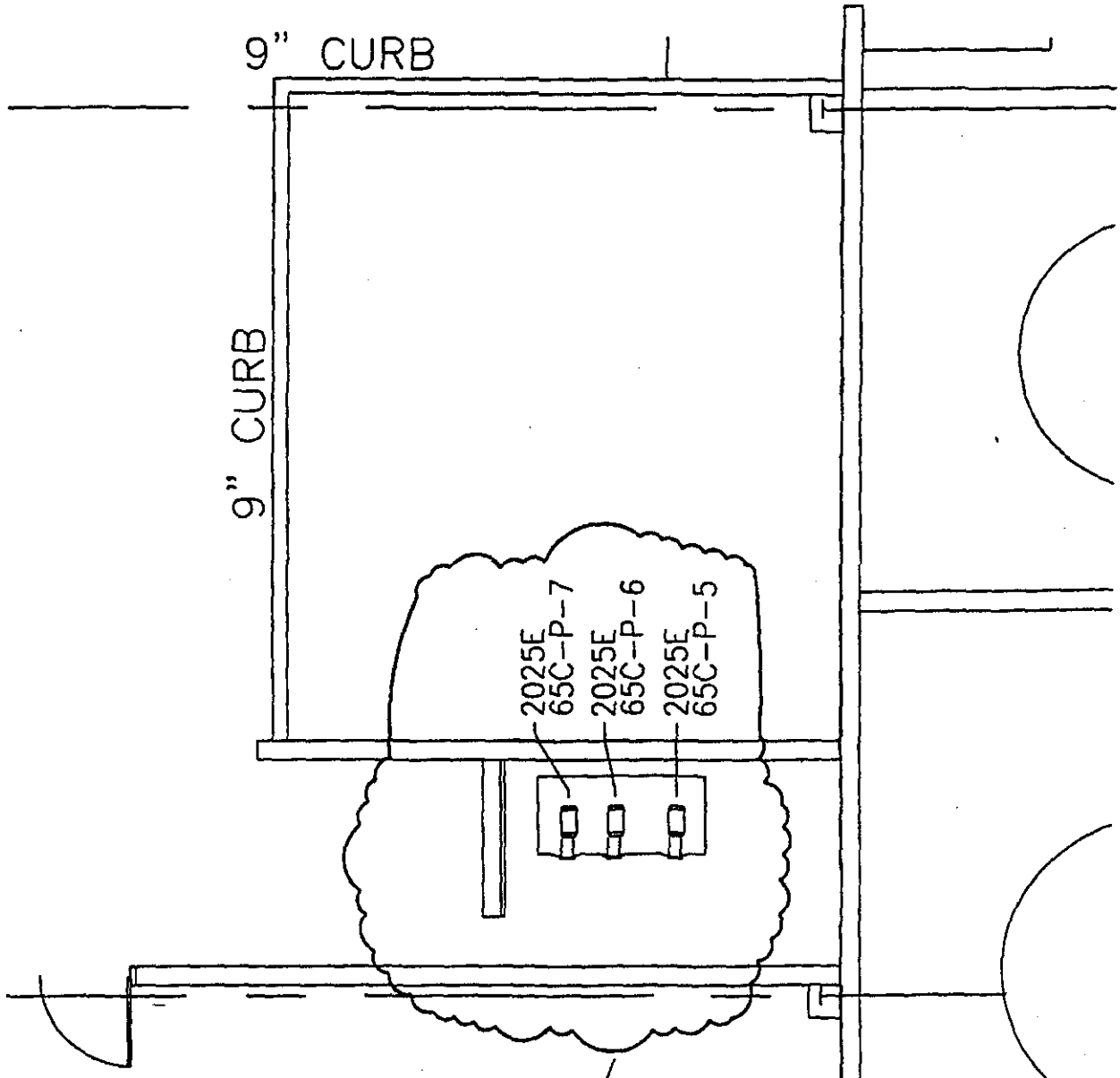


SECTION G

H-2-89200 SH1, REV 3



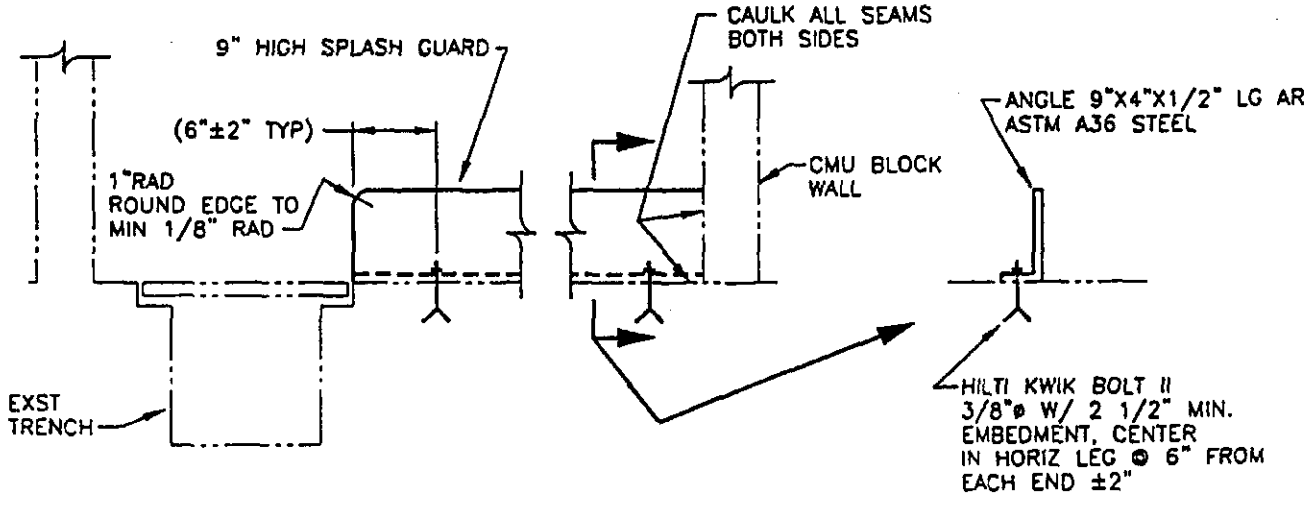
H-2-89047 SH1, REV 6



ZONE: B 3

H-2-89162 SH1, REV 4

NOTE:
COAT WITH SPC IN ACCORDANCE WITH CONSTRUCTION SPEC S-1131-103, REV 4, SECTION 09805



SECTION F
SCALE: NONE (H-2-89047 SH 1)

H-2-89047 SH 2, REV 0

S

CPF 18

ENGINEERING CHANGE NOTICE ESSENTIAL

Page 1 of 8

1. ECN 647245

Proj. ECN

2. ECN Category (mark one)	3. Originator's Name, Organization, MSIN, and Telephone No.	4. USQ Required?	5. Date
Supplemental [x] Direct Revision [] Change ECN [] Temporary [] Standby [] Supersedure [] Cancel/Void []	RN Wagner/32200/S6-72/376-4460	[] Yes [x] No	June 22, 1998
	6. Project Title/No./Work Order No. A4055 Install Pressure Bleed Valves in Peroxide Feed Lines/Correct Hand Switch Number	7. Bldg./Sys./Fac. No. 2025E/60D/ 200 Area ETF	8. Approval Designator NA
	9. Document Numbers Changed by this ECN (includes sheet no. and rev.) See Block 13	10. Related ECN No(s). NA	11. Related PO No. NA

12a. Modification Work	12b. Work Package No.	12c. Modification Work Complete	12d. Restored to Original Condition (Temp. or Standby ECN only)
[x] Yes (fill out Blk. 12b) [] No (NA Blks. 12b, 12c, 12d)	EL-98-00463	Design Authority/Cog. Engineer Signature & Date	NA Design Authority/Cog. Engineer Signature & Date

13a. Description of Change 13b. Design Baseline Document? [x] Yes [] No

This ECN adds needle valves to the UV/OX hydrogen peroxide injection system for the purpose of bleeding system pressure in a controlled manner prior to maintenance, and corrects the number of a hand switch for one of the peroxide injection feed pumps as shown on the drawing. The new pressure bleed valves will be Whitey part number SS-1VS4 316 or engineering approved equivalent, consistent with the system pipe code and temperature/pressure rating.

Drawings affected are:

- H-2-88976, Sheet 1, Rev. 6
- H-2-89342, Sheet 1, Rev. 6
- H-2-89350, Sheet 1, Rev. 8

Piping, fittings, and jointing methods shall meet the requirements of ETF Piping Specification Class 153T, "Type 316 Stainless Steel Tubing." Install, inspect, and test the new piping installation in accordance with ASME B31.3 and Addenda for Category D fluid service.

(Block 13a continued on Page 3)

14a. Justification (mark one)

Criteria Change	[]	Design Improvement	[x]	Environmental	[]	Facility Deactivation	[]
As-Found	[x]	Facilitate Const	[]	Const. Error/Omission	[]	Design Error/Omission	[]

14b. Justification Details

Provides a safe and controlled means of bleeding system pressure prior to maintenance, and corrects a drawing error (hand switch number)

15. Distribution (include name, MSIN, and no. of copies)

N. J. Sullivan	S6-72	1	R. J. Nicklas	T3-07	1
J. E. Geary	S6-71	1	A. K. Yoakum	S6-71	1
R. N. Wagner*	S6-72	2	M. W. Bowman	S6-72	1
E. A. McNamar	S6-72	1	C. D. Skogley	T4-05	1
D. L. Tubbs	S6-74	1	WCC Planning	S6-71*	1
D. P. Nelsen	S6-71	1	T. W. Dallas	S6-74	1
J. M. Petty	S6-74	1	D. L. Flyckt	S6-71	1
J. M. Isdell	G3-17	1*	L. L. Lin	S6-72	1

(* = 1 Advance Copy)

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JUN 29 1998
DATE:
STA:
HANFORD RELEASE
ID:
30
125

ENGINEERING CHANGE NOTICE	Page 2 of 8	1. ECN (use no. from pg. 1) 647245

16. Design Verification Required	17. Cost Impact ——> NA <—— ENGINEERING		CONSTRUCTION		18. Schedule Impact (days) ——> NA <——	
[X] Yes	Additional	[] $	Additional	[] $	Improvement	[]
[] No	Savings	[] $	Savings	[] $	Delay	[]

19. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 13. Enter the affected document number in Block 20.

SDD/DD	[NA]	Seismic/Stress Analysis	[NA]	Tank Calibration Manual	[NA]
Functional Design Criteria	[NA]	Stress/Design Report	[NA]	Health Physics Procedure	[NA]
Operating Specification	[NA]	Interface Control Drawing	[NA]	Spares Multiple Unit Listing	[NA]
Criticality Specification	[NA]	Calibration Procedure	[NA]	Test Procedures/Specification	[NA]
Conceptual Design Report	[NA]	Installation Procedure	[NA]	Component Index	[x]
Equipment Spec.	[NA]	Maintenance Procedure	[NA]	ASME Coded Item	[NA]
Const. Spec.	[NA]	Engineering Procedure	[NA]	Human Factor Consideration	[NA]
Procurement Spec.	[NA]	Operating Instruction	[NA]	Computer Software	[NA]
Vendor Information	[NA]	Operating Procedure	[x]	Electric Circuit Schedule	[NA]
OM Manual	[NA]	Operational Safety Requirement	[NA]	ICRS Procedure	[NA]
FSAR/SAR	[NA]	IEFD Drawing	[NA]	Process Control Manual/Plan	[NA]
Safety Equipment List	[NA]	Cell Arrangement Drawing	[NA]	Process Flow Chart	[NA]
Radiation Work Permit	[NA]	Essential Material Specification	[NA]	Purchase Requisition	[NA]
Environmental Impact Statement	[NA]	Fac. Proc. Samp. Schedule	[NA]	Tickler File	[NA]
Environmental Report	[NA]	Inspection Plan	[NA]		[]
Environmental Permit	[NA]	Inventory Adjustment Request	[NA]		[]

20. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

Document Number/Revision	Document Number/Revision	Document Number Revision
JCS Component Index	POP-60D-006 Rev. 11	

21. Approvals

	Signature	Date
Design Authority - R. N. Wagner		6/22/98
Cog. Eng. - R. N. Wagner		6/22/98
Cog. Mgr. - R. J. Nicklas (Informal Design Review)	FOR	6-22-98
QA		
Safety		
Environ.		
Other		

	Signature	Date
Design Agent - R. N. Wagner		6/22/98
PE		
QA		
Safety		
Design		
Environ.		
Other		

DEPARTMENT OF ENERGY

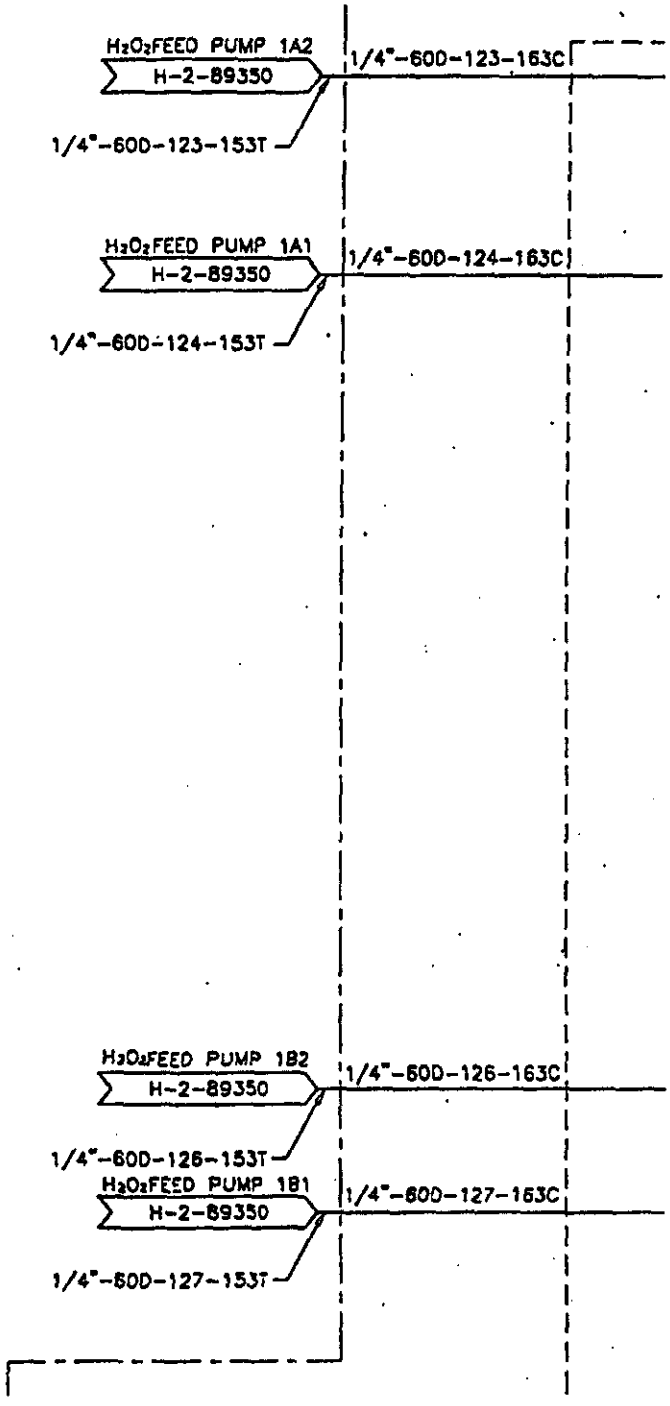
Signature or a Control Number that tracks the Approval Signature

ADDITIONAL

BLOCK 13a CONTINUED

H-2-88976, Sheet 1, Rev. 6, Zones C6–F6

IS:



H-2-88976, Sheet 1, Rev. 6, Zones C6–F6

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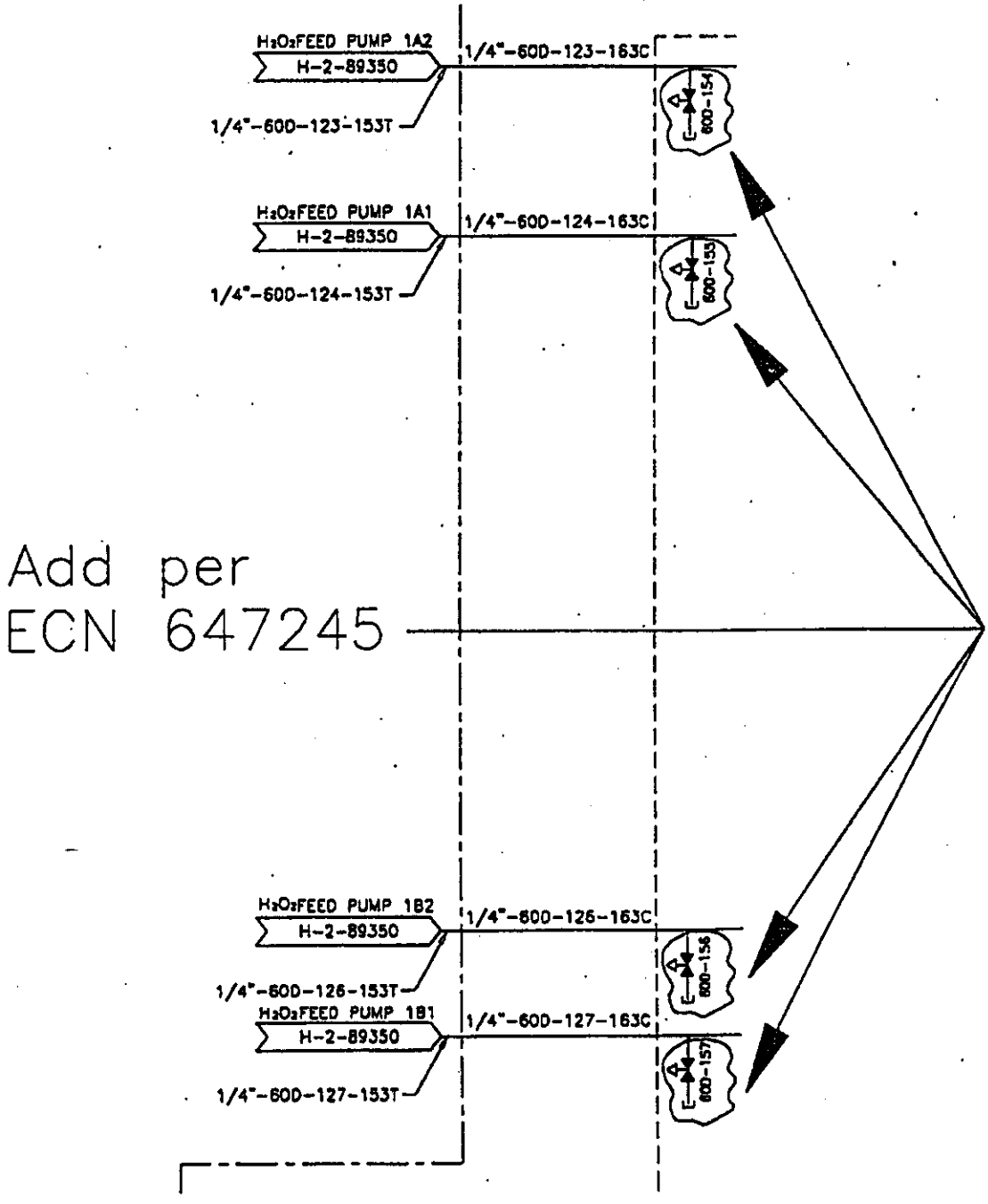
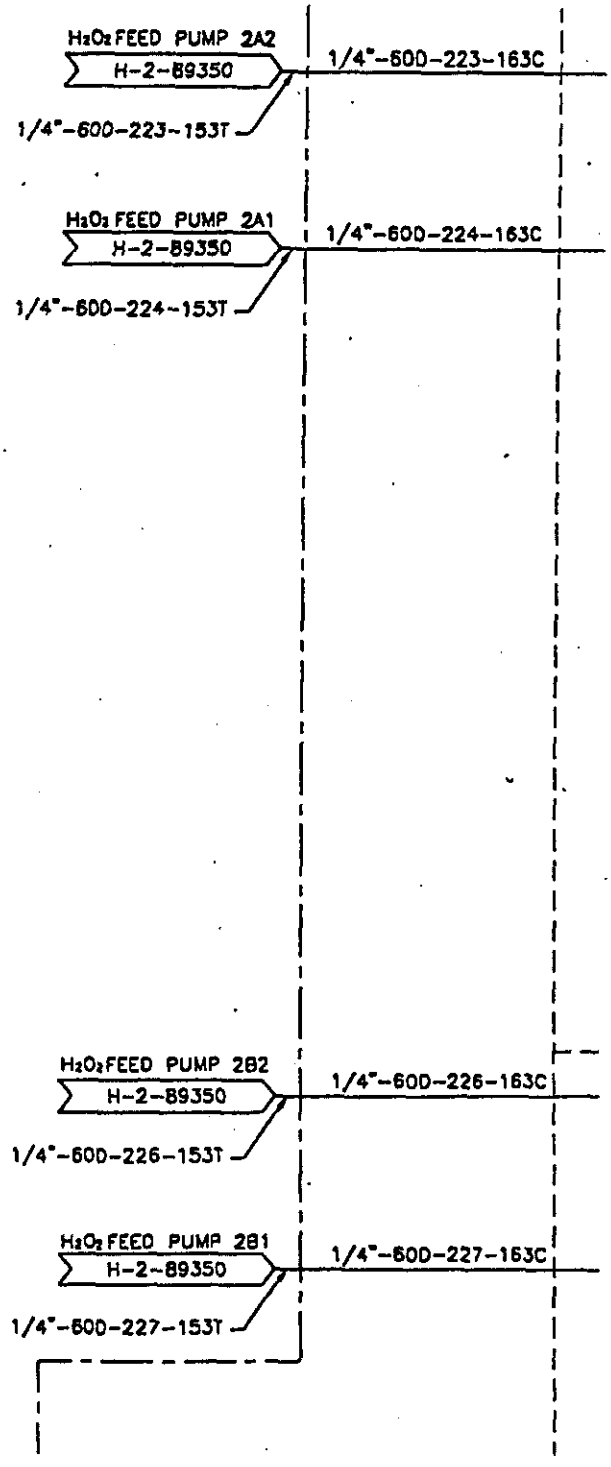


H-2-89342, Sheet 1, Rev. 6, Zones C7-F7

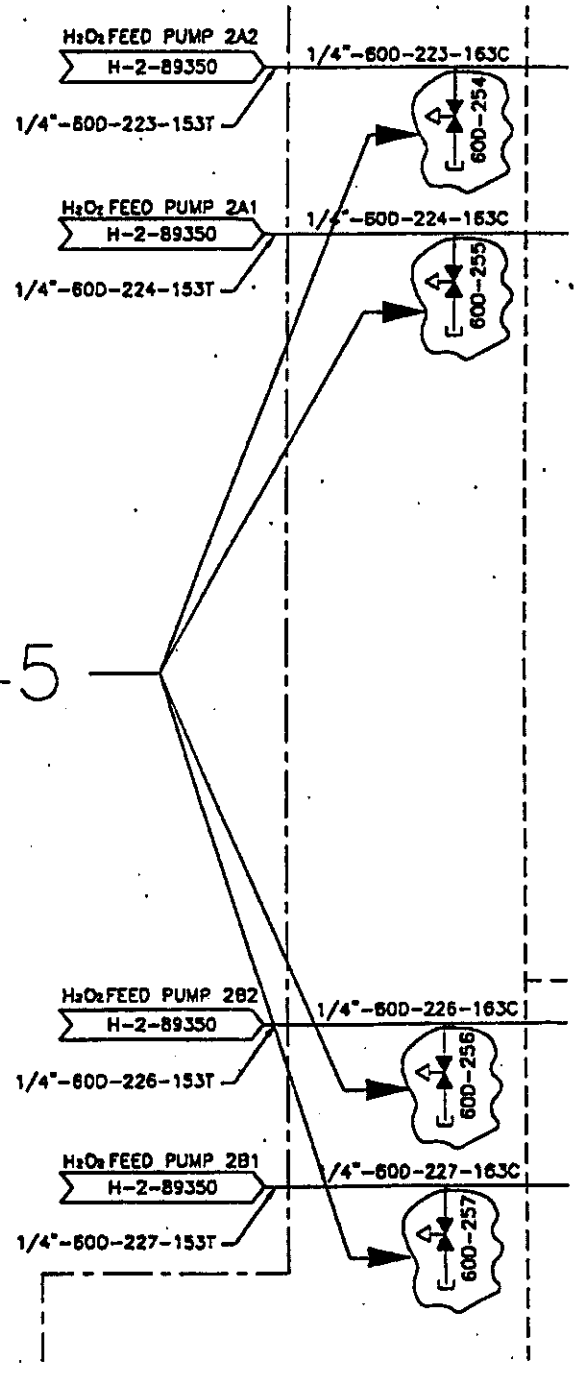
IS:



H-2-89342, Sheet 1, Rev. 6, Zones C7–F7

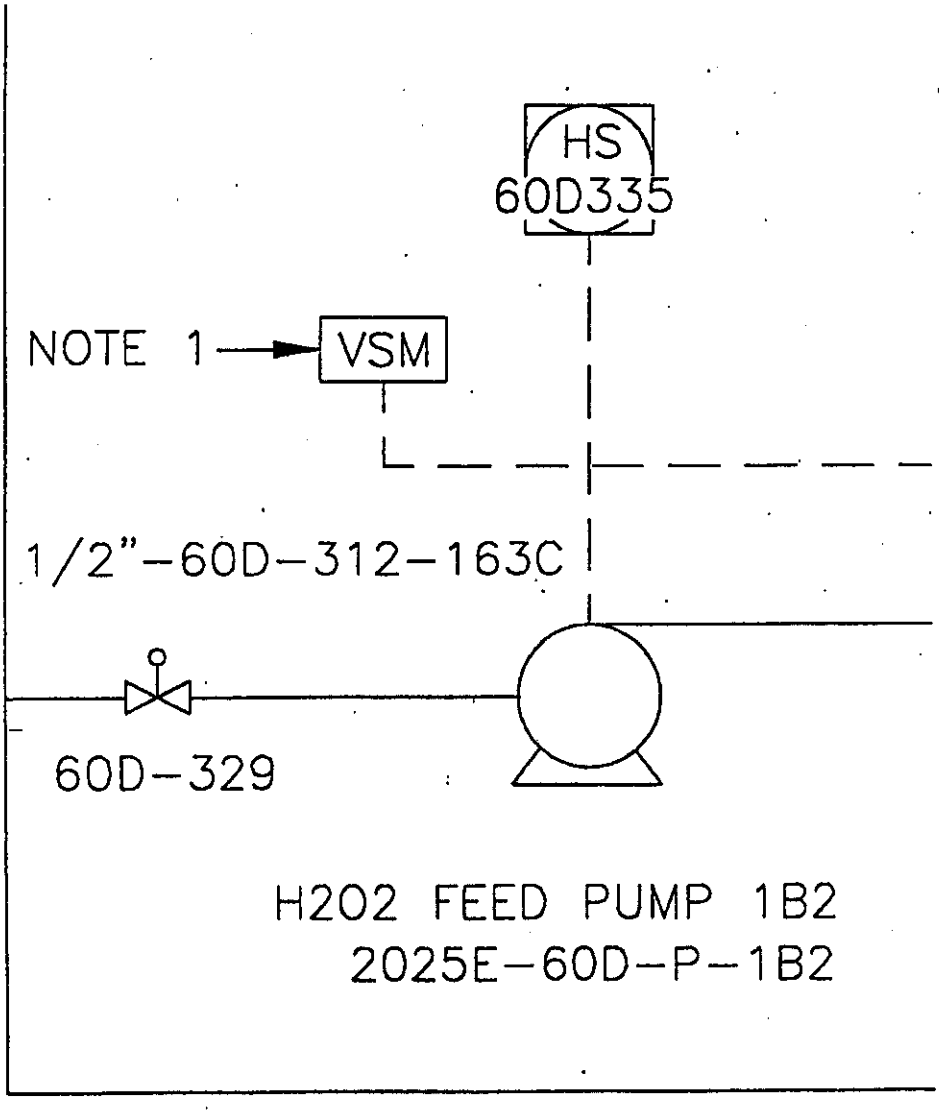
CHANGE TO:

Add per
ECN 647245



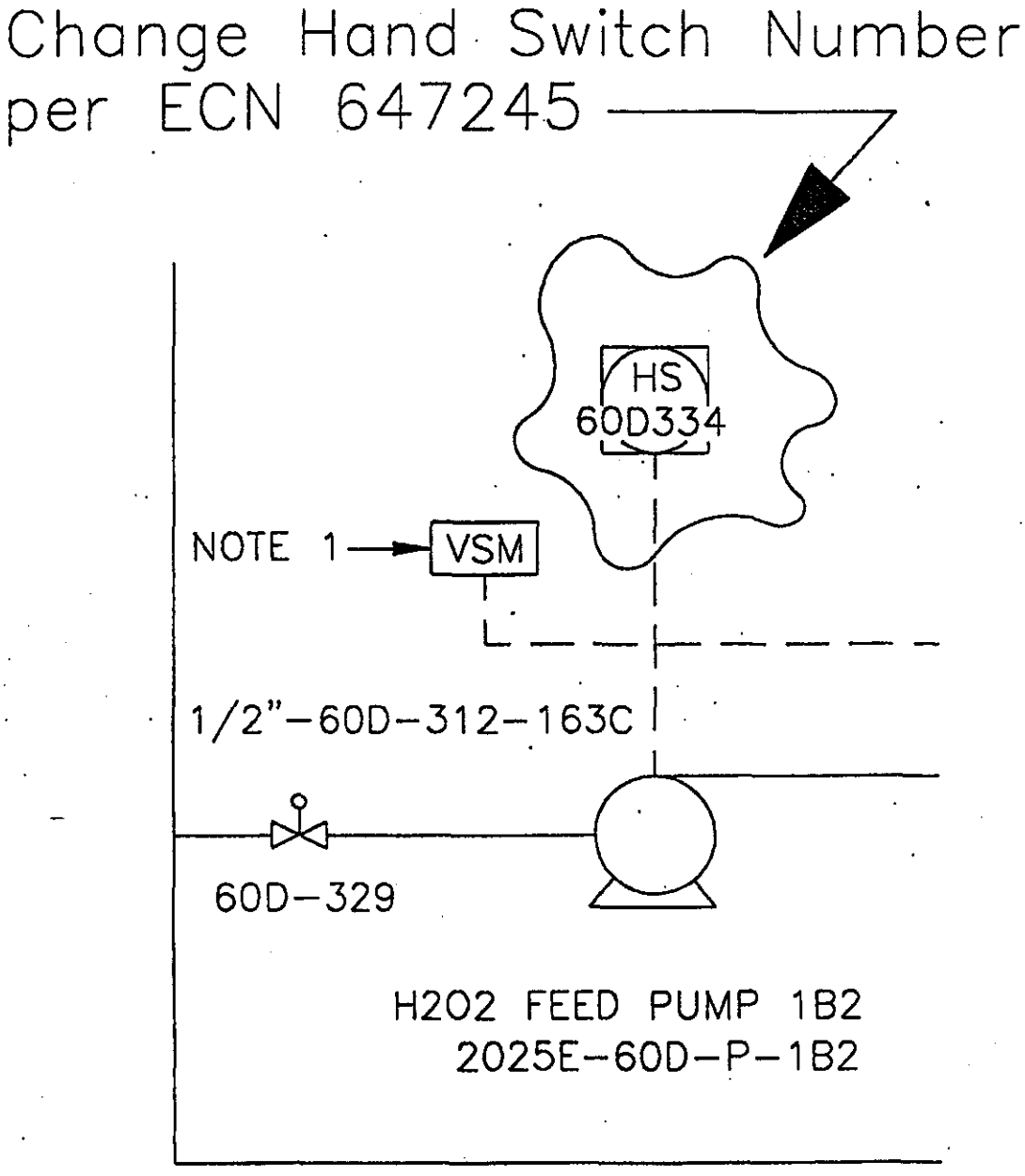
H-2-89350, Sheet 1, Rev. 8, Zone B6

IS:



H-2-89350, Sheet 1, Rev. 8, Zone B6

CHANGE TO:



ENGINEERING CHANGE NOTICE **ESSENTIAL**

CPF 18

Page 1 of 4

1. ECN 642800

Proj. ECN

2. ECN Category (mark one)	3. Originator's Name, Organization, MSIN, and Telephone No.	4. USQ Required?	5. Date
Supplemental [X] (struck out, initialed) Direct Revision [] Change ECN [] Temporary [] Standby [] Supersedure [X] Cancel/Void []	LL Lin, 32230, S6-72, 372-2759	[] Yes [X] No	10/01/97
	6. Project Title/No./Work Order No. Provide Sample Point on Polisher Skid Drain Header/A4055	7. Bldg./Sys./Fac. No. 2025E/60G	8. Approval Designator NA
	9. Document Numbers Changed by this ECN (includes sheet no. and rev.) H-2-88983, Rev 6, 7 Sh 1	10. Related ECN No(s). ECN-192548	11. Related PO No. None

12a. Modification Work	12b. Work Package No.	12c. Modification Work Complete	12d. Restored to Original Condition (Temp. or Standby ECN only)
[X] Yes (fill out Blk. 12b) [] No (NA Blks. 12b, 12c, 12d)	EL-95-000233	Design Authority/Cog. Engineer Signature & Date	NA Design Authority/Cog. Engineer Signature & Date

13a. Description of Change — 13b. Design Baseline Document? [X] Yes [] No

This ECN supersedes ECN 192548 in its entirety.

Description of Changes:

Affected documents:

ECN-192548
H-2-88983 Rev 6 P&ID, Polisher

See pages 3 and 4 of this ECN for details.

14a. Justification (mark one)

Criteria Change	[]	Design Improvement	[X]	Environmental	[]	Facility Deactivation	[]
As-Found	[X]	Facilitate Const	[]	Const. Error/Omission	[]	Design Error/Omission	[]

14b. Justification Details

A sample valve is needed at the polisher drain header to allow sampling and determination of the adequacy of the SLOW RINSE and FAST RINSE steps of the polisher regeneration.

This ECN also corrects drawing errors.

15. Distribution (include name, MSIN, and no. of copies)

L. L. Lin, S6-72, 1
N. J. Sullivan, S6-72, 1
D. P. Nelsen, S6-71, 1
D. L. Tubbs, S6-74, 1
~~ETF Tech Library, S6-72~~
~~Stations 4,30,5,3,15,16~~ 10/8/97
J. E. Geary, S6-71, 1
E. A. McNamar, S6-72, 1
R. N. Wagner, S6-72, 1

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OCT 08 1997
DATE:
STA: 30
HANFORD RELEASE
ID: 25

A-7900-013-2 (05/96) GEF095

A-7900-013-1

ENGINEERING CHANGE NOTICE	Page 2 of 4	1. ECN (use no. from pg. 1) 642800

16. Design Verification Required	17. Cost Impact				18. Schedule Impact (days)	
	ENGINEERING		CONSTRUCTION			
[X] Yes	Additional	[] $	Additional	[] $	Improvement	[]
[] No	Savings	[] $	Savings	[] $	Delay	[]

19. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 13. Enter the affected document number in Block 20.

SDD/DD	[na]	Seismic/Stress Analysis	[na]	Tank Calibration Manual	[na]
Functional Design Criteria	[]	Stress/Design Report	[]	Health Physics Procedure	[]
Operating Specification	[]	Interface Control Drawing	[]	Spares Multiple Unit Listing	[]
Criticality Specification	[]	Calibration Procedure	[]	Test Procedures/Specification	[]
Conceptual Design Report	[]	Installation Procedure	[]	Component Index	[X]
Equipment Spec.	[]	Maintenance Procedure	[]	ASME Coded Item	[N/A]
Const. Spec.	[]	Engineering Procedure	[]	Human Factor Consideration	[]
Procurement Spec.	[]	Operating Instruction	[]	Computer Software	[]
Vendor Information	[X]	Operating Procedure	[X]	Electric Circuit Schedule	[]
OM Manual	[N/A]	Operational Safety Requirement	[]	ICRS Procedure	[]
FSAR/SAR	[]	IEFD Drawing	[X]	Process Control Manual/Plan	[]
Safety Equipment List	[]	Cell Arrangement Drawing	[N/A]	Process Flow Chart	[]
Radiation Work Permit	[]	Essential Material Specification	[]	Purchase Requisition	[]
Environmental Impact Statement	[]	Fac. Proc. Samp. Schedule	[]	Tickler File	[]
Environmental Report	[]	Inspection Plan	[]		[]
Environmental Permit	[]	Inventory Adjustment Request	[]		[]

20. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

Document Number/Revision	Document Number/Revision	Document Number Revision
POP 60G-002, POP 60-006		

21. Approvals

	Signature	Date
Design Authority	L. L. Lin	10-1-97
Cog. Eng.	L. L. Lin	10-1-97
Cog. Mgr.	N. J. Sullivan	10-1-97
QA	(informal review)	
Safety		
Environ.		
Other		

	Signature	Date
Design Agent		10-1-97
PE		
QA		
Safety		
Design		
Environ.		
Other		

DEPARTMENT OF ENERGY

Signature or a Control Number that tracks the Approval Signature

ADDITIONAL

1. Install a 1/2 inch sample valve, 60G-044, at the polisher drain header (3"-60G-022-155V). Material type and pressure rating for the installation shall be compatible with ETF pipe class 155V for INDECK.

2. Correct drawing error for valve number call out. Change 60G-407 to 60G-036.

3. Correct drawing error on polisher waste drain header 3"-60G-022-155V.

4. Piping, fittings and jointing methods are to meet the requirements of ETF piping spec class 155V. Install, inspect and test the new piping installation in accordance with ASME B31.3-1993 edition and addenda for Normal Fluid Service.

ECN 642800
Page 4 of 4
H-2-88983

ESSENTIAL

ENGINEERING CHANGE NOTICE

Page 1 of 4

1. ECN 641719

Proj. ECN

CPF 18

2. ECN Category (mark one)	3. Originator's Name, Organization, MSIN, and Telephone No.	4. USQ Required?	5. Date
Supplemental [X] Direct Revision [ ] Change ECN [ ] Temporary [ ] Standby [ ] Supersedure [ ] Cancel/Void [ ]	DE SCULLY/32230/S6-72/372-3592	[ ] Yes [X] No	6/2/97
	6. Project Title/No./Work Order No. Provide Window Washer for ETF Evaporator	7. Bldg./Sys./Fac. No. 2025E/601	8. Approval Designator n/a
	9. Document Numbers Changed by this ECN (includes sheet no. and rev.) H-2-89335, rev 7, sht 1	10. Related ECN No(s). none	11. Related PO No.

12a. Modification Work	12b. Work Package No.	12c. Modification Work Complete	12d. Restored to Original Condition (Temp. or Standby ECN only)
[X] Yes (fill out Blk. 12b) [ ] No (NA Blks. 12b, 12c, 12d)	EL-97-00425	Design Authority/Cog. Engineer Signature & Date	Design Authority/Cog. Engineer Signature & Date

13a. Description of Change 13b. Design Baseline Document? [X] Yes [ ] No

Install a SS 316 bleed ring, drilled and tapped to 1/8" NPT, behind the evaporator vapor body observation window. Route distillate to this ring via 1/4 SS tubing. Provide ball valve for operator use in cleaning window.

System Lead has provided design verification (informal review).

Provide "normally closed" status for valve 60I-246.

3, 4, 5, 16, 30 SIA

14a. Justification (mark one)

Criteria Change	[ ]	Design Improvement	[X]	Environmental	[ ]	Facility Deactivation	[ ]
As-Found	[ ]	Facilitate Const	[ ]	Const. Error/Omission	[ ]	Design Error/Omission	[ ]

14b. Justification Details

This window occaisonally becomes fogged or obscured with brine/suspended solids that are sloshed up into the window during normal evaporator operation. This window is extremely useful, if not at times critical, for monitoring evaporator operation. It therefore needs to be kept clean for clear observation of the evaporating brine. This washer will allow the operator to clean the window at will by temporarily opening the ball valve located near the window.

15. Distribution (include name, MSIN, and no. of copies)

DE SCULLY, S6-72, 1
DP NELSEN, S6-71, 1
JE GEARY, S6-71, 1
NJ SULLIVAN, S6-72, 1
JL VIGUE, S6-74, 1
RJ HUTH, S6-72, 1
RS WEBER, S6-71, 1
BS DARLING, S6-71, 1
AK YOAKUM, S6-71, 1

RELEASE STAMP
DATE: JUN 03 1997
STA: 30
HANFORD RELEASE
ID: 25

A-7900-013-2 (05/96) GEF095

A-7900-013-1

ENGINEERING CHANGE NOTICE	Page 2 of 6	1. ECN (use no. from pg. 1) 641719

16. Design Verification Required	17. Cost Impact N/A		18. Schedule Impact (days) N/A
	ENGINEERING	CONSTRUCTION	
[X] Yes	Additional [] $	Additional [] $	Improvement []
[] No	Savings [] $	Savings [] $	Delay []

19. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 13. Enter the affected document number in Block 20.

SDD/DD	[]	Seismic/Stress Analysis	[]	Tank Calibration Manual	[]
Functional Design Criteria	[]	Stress/Design Report	[]	Health Physics Procedure	[]
Operating Specification	[]	Interface Control Drawing	[]	Spares Multiple Unit Listing	[]
Criticality Specification	[]	Calibration Procedure	[]	Test Procedures/Specification	[]
Conceptual Design Report	[]	Installation Procedure	[]	Component Index	[]
Equipment Spec.	[]	Maintenance Procedure	[]	ASME Coded Item	[]
Const. Spec.	[]	Engineering Procedure	[]	Human Factor Consideration	[]
Procurement Spec.	[]	Operating Instruction	[]	Computer Software	[]
Vendor Information	[]	Operating Procedure	[X]	Electric Circuit Schedule	[]
OM Manual	[]	Operational Safety Requirement	[]	ICRS Procedure	[]
FSAR/SAR	[]	IEFD Drawing	[]	Process Control Manual/Plan	[]
Safety Equipment List	[]	Cell Arrangement Drawing	[]	Process Flow Chart	[]
Radiation Work Permit	[]	Essential Material Specification	[]	Purchase Requisition	[]
Environmental Impact Statement	[]	Fac. Proc. Samp. Schedule	[]	Tickler File	[]
Environmental Report	[]	Inspection Plan	[]		[]
Environmental Permit	[]	Inventory Adjustment Request	[]		[]

20. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

Document Number/Revision	Document Number/Revision	Document Number Revision
P0P-60I-003		

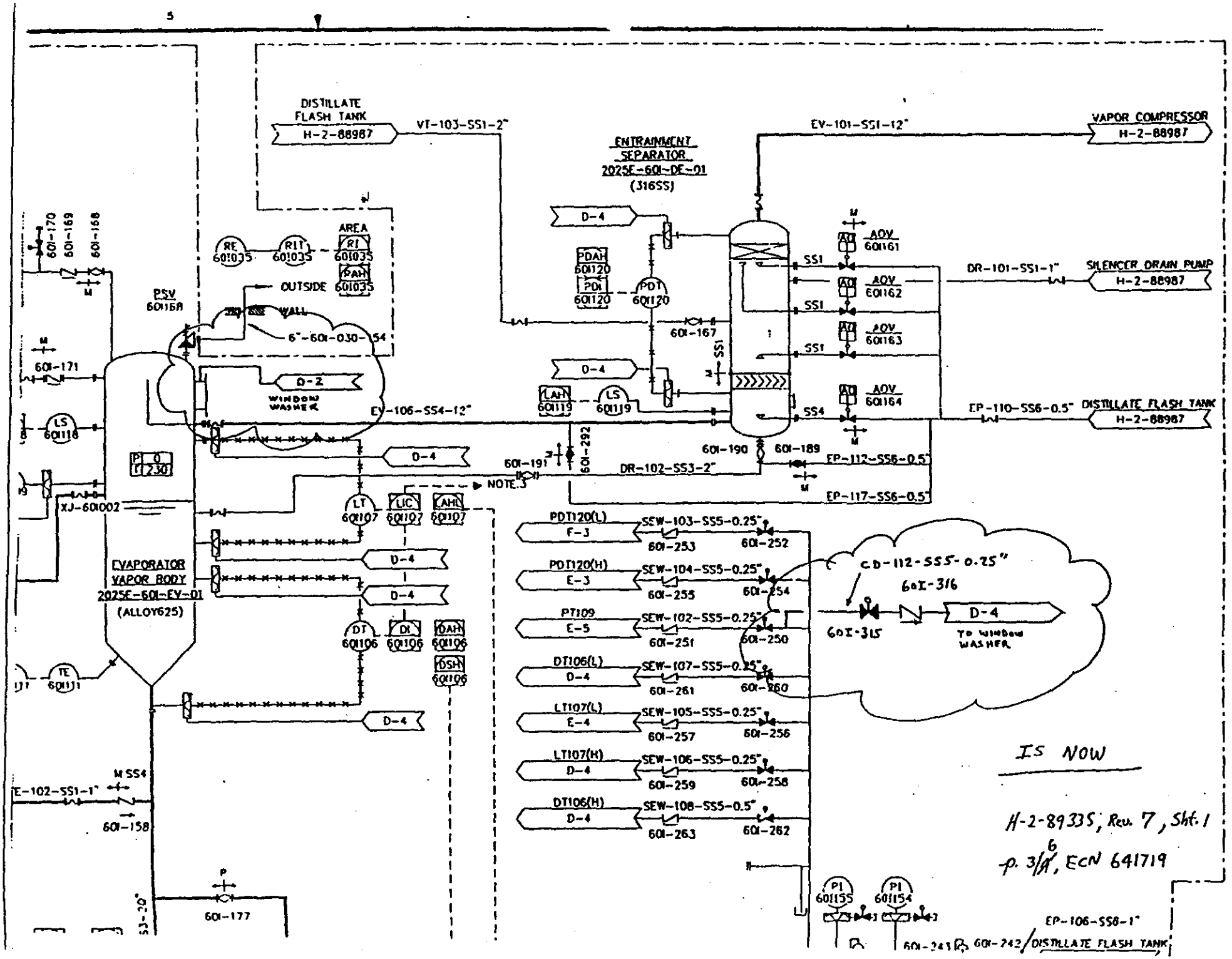
21. Approvals

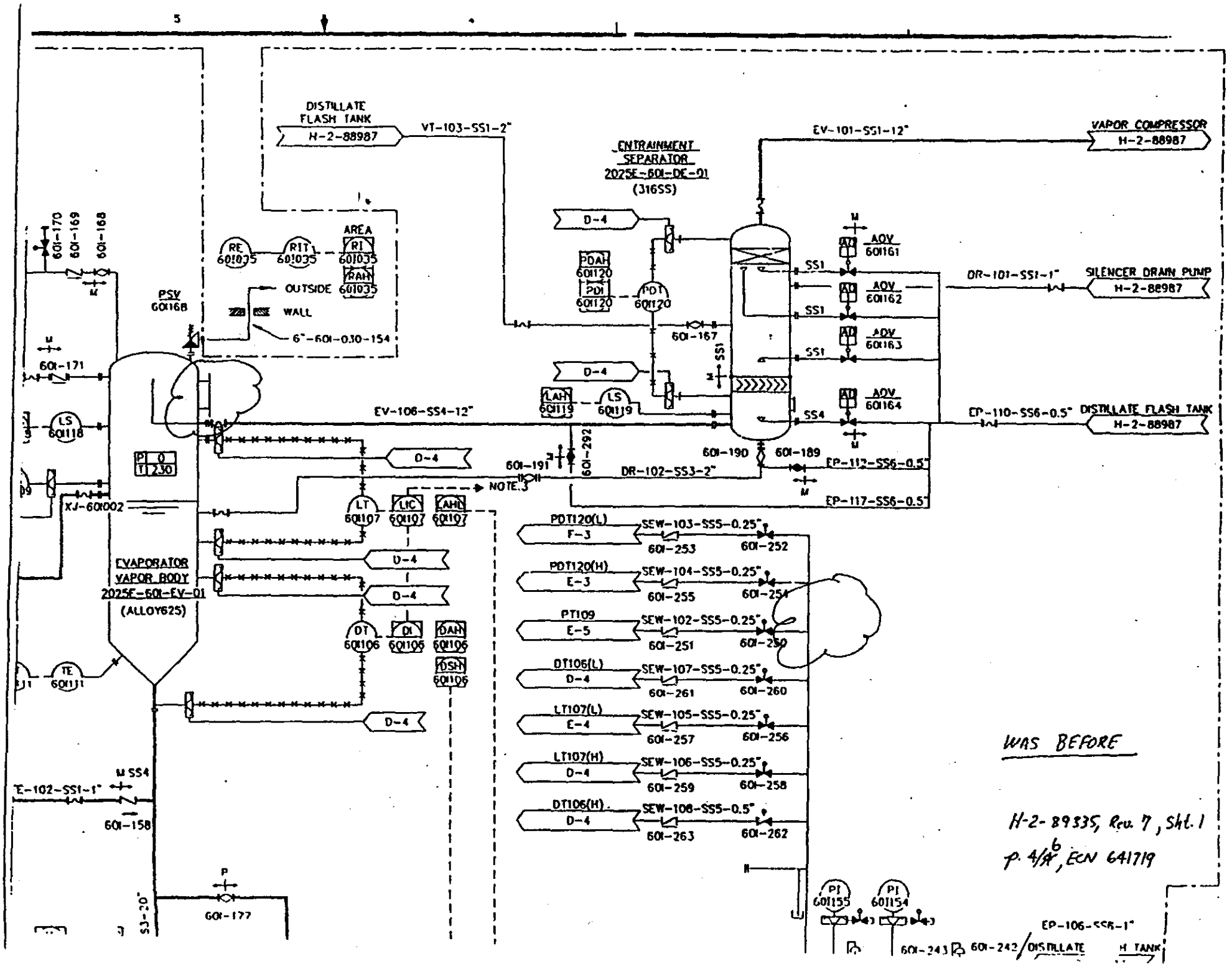
	Signature	Date		Signature	Date
Design Authority	DE Scully DE Scully	6/2/97	Design Agent	DE Scully DE Scully	6/2/97
Cog. Eng.	DE Scully DE Scully	6/2/97	PE		
Cog. Mgr.	NL Sullivan NJ Sull	6-2-97	QA		
QA			Safety		
Safety			Design		
Environ.			Environ.		
Other			Other		

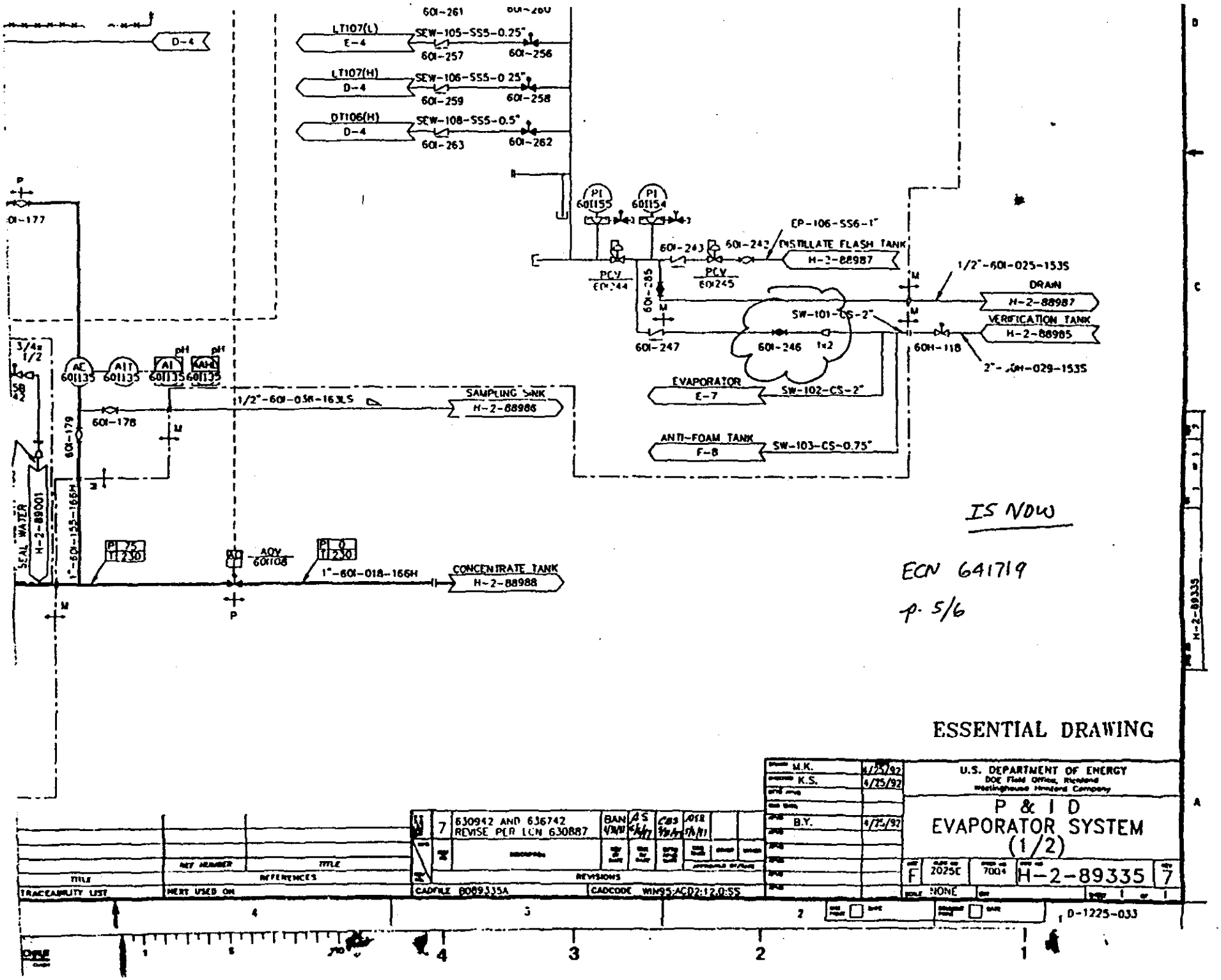
DEPARTMENT OF ENERGY

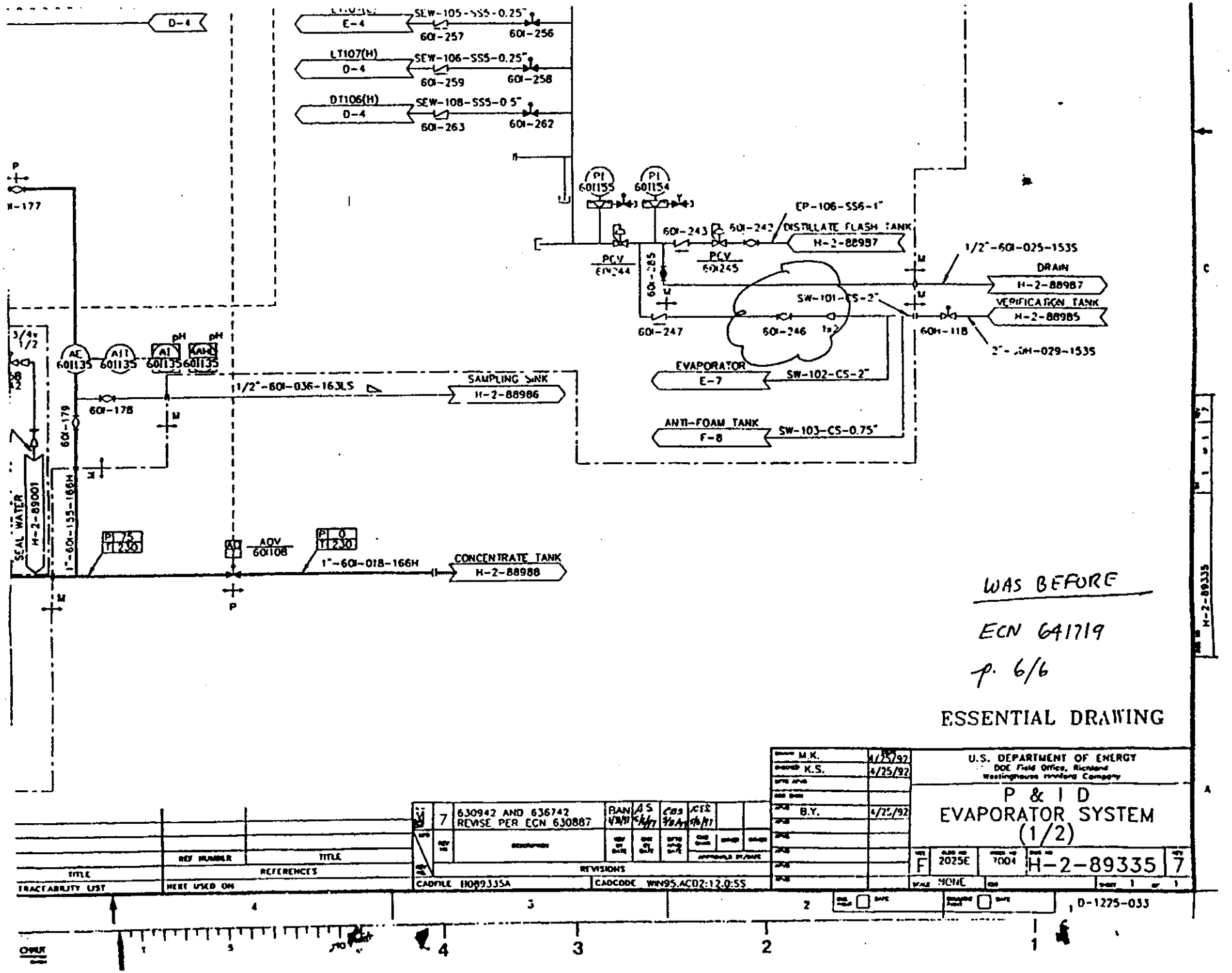
Signature or a Control Number that tracks the Approval Signature

ADDITIONAL


DISTILLATE FLASH TANK H-2-88987
VT-103-SS1-2"
ENTRAINMENT SEPARATOR 2025E-601-DE-01 (316SS)
EV-101-SS1-12"
VAPOR COMPRESSOR H-2-88987
AOV 601161
AOV 601162
AOV 601163
AOV 601164
DR-101-SS1-1"
SILENCER DRAIN PUMP H-2-88987
EP-110-SS6-0.5"
DISTILLATE FLASH TANK H-2-88987
EP-112-SS6-0.5"
EP-117-SS6-0.5"
DR-102-SS3-2"
EV-106-SS4-12"
6"-601-030-154
OUTSIDE WALL
AREA
RE 601035
RIT 601035
RI 601035
PAH 601035
PSV 601168
601-170
601-169
601-168
601-171
LS 601118
PI 601230
XJ-601002
EVAPORATOR VAPOR BODY 2025E-601-EV-01 (ALLOY625)
(ALLOY625)
TE 601131
LT 601107
LIC 601107
LAHL 601107
DT 601106
DI 601106
DAH 601106
DSH 601106
PDAH 601120
PDI 601120
PDT 601120
LAH 601119
LS 601119
601-167
601-190
601-189
601-191
601-292
NOTE 3
D-2
WINDOW WASHER
D-4
PDT120(L) F-3
PDT120(H) E-3
PT109 E-5
DT106(L) D-4
LT107(L) E-4
LT107(H) D-4
DT106(H) D-4
SEW-103-SS5-0.25"
SEW-104-SS5-0.25"
SEW-102-SS5-0.25"
SEW-107-SS5-0.25"
SEW-105-SS5-0.25"
SEW-106-SS5-0.25"
SEW-108-SS5-0.5"
601-253
601-252
601-255
601-254
601-251
601-250
601-261
601-260
601-257
601-256
601-259
601-258
601-263
601-262
CD-112-SS5-0.25"
601-316
601-315
D-4
TO WINDOW WASHER
IS NOW
H-2-89335, Rev. 7, Sht. 1
p. 3/6, ECN 641719
PI 601155
PI 601154
EP-106-SS6-1"
601-243
601-242/DISTILLATE FLASH TANK
E-102-SS1-1"
601-158
601-177
53-20"


DISTILLATE FLASH TANK
H-2-88987
VT-103-SS1-2"
ENTRAINMENT SEPARATOR
2025E-601-DE-01
(316SS)
EV-101-SS1-12"
VAPOR COMPRESSOR
H-2-88987
AREA
OUTSIDE
WALL
6"-601-030-154
PSV 60116B
601-170
601-169
601-168
601-171
LS 60118
EV-106-SS4-12"
601-167
SS1
SS4
AOV 60116I
AOV 60162
AOV 60163
AOV 60164
DR-101-SS1-1"
SILENCER DRAIN PUMP
H-2-88987
EP-110-SS6-0.5"
DISTILLATE FLASH TANK
H-2-88987
601-190
601-189
601-191
601-292
DR-102-SS3-2"
EP-112-SS6-0.5"
EP-117-SS6-0.5"
NOTE 3
XJ-601002
EVAPORATOR VAPOR BODY
2025E-601-EV-01
(ALLOY625)
PDT120(L)
F-3
SEW-103-SS5-0.25"
601-253
601-252
PDT120(H)
E-3
SEW-104-SS5-0.25"
601-255
601-254
PT109
E-5
SEW-102-SS5-0.25"
601-251
601-250
DT106(L)
D-4
SEW-107-SS5-0.25"
601-261
601-260
LT107(L)
E-4
SEW-105-SS5-0.25"
601-257
601-256
LT107(H)
D-4
SEW-106-SS5-0.25"
601-259
601-258
DT106(H)
D-4
SEW-108-SS5-0.5"
601-263
601-262
E-102-SS1-1"
601-158
601-177
S3-20"
601-243
601-242/DISTILLATE
WAS BEFORE
H-2-89335, Rev. 7, Sht. 1
P. 4/4, ECN 641719


LT107(L)
E-4
SEW-105-SS5-0.25"
601-257
601-256
LT107(H)
D-4
SEW-106-SS5-0.25"
601-259
601-258
DT106(H)
D-4
SEW-108-SS5-0.5"
601-263
601-262
PI 601155
PI 601154
EP-106-SS6-1"
601-243
601-242
INSTILLATE FLASH TANK
H-2-88987
PCV 601244
PCV 601245
601-285
1/2"-601-025-153S
DRAIN
H-2-88987
SW-101-CS-2"
VERIFICATION TANK
H-2-88985
601-247
601-246
1x2
60H-118
2"-60H-029-153S
EVAPORATOR
E-7
SW-102-CS-2"
ANTI-FOAM TANK
F-8
SW-103-CS-0.75"
AE 601135
AIT 601135
AI 601135
AAH 601135
pH
1/2"-601-0SR-163LS
SAMPLING SINK
H-2-88986
601-178
601-179
SEAL WATER
H-2-89001
1"-601-153-166H
PI 75 T230
AOV 601108
PI 0 T230
1"-601-018-166H
CONCENTRATE TANK
H-2-88988
IS NOW
ECN 641719
p. 5/6
ESSENTIAL DRAWING
U.S. DEPARTMENT OF ENERGY
DOE Field Office, Richland
Westinghouse Hanford Company
P & I D
EVAPORATOR SYSTEM
(1/2)
H-2-89335
7
630942 AND 636742
REVISE PER LCN 630887
M.K. 4/25/92
K.S. 4/25/92
B.Y. 4/25/92
CADFILE B089335A
CADCODE WIN95;ACD2;12.0;SS
D-1225-033


D-4
E-4
SEW-105-SS5-0.25"
601-257
601-256
LT107(H)
D-4
SEW-106-SS5-0.25"
601-259
601-258
DT106(H)
D-4
SEW-108-SS5-0.5"
601-263
601-262
PI 601155
PI 601154
EP-106-SS6-1"
601-243
601-242
DISTILLATE FLASH TANK
H-2-88987
PCV EN244
PCV 60I245
1/2"-601-025-153S
DRAIN
H-2-88987
SW-101-CS-2"
VERIFICATION TANK
H-2-88985
601-247
601-246
60H-118
EVAPORATOR
E-7
SW-102-CS-2"
ANTI-FOAM TANK
F-8
SW-103-CS-0.75"
SAMPLING SINK
H-2-88986
1/2"-601-036-163LS
601-178
601-179
SEAL WATER
H-2-89001
1"-601-155-166H
AOV 601108
1"-601-018-166H
CONCENTRATE TANK
H-2-88988
WAS BEFORE
ECN 641719
p. 6/6
ESSENTIAL DRAWING
U.S. DEPARTMENT OF ENERGY
DOE Field Office, Richland
Westinghouse Hanford Company
P & I D
EVAPORATOR SYSTEM
(1/2)
H-2-89335
7
630942 AND 636742
REVISE PER ECN 630887
CADFILE H089335A
CADCODE WIN95.ACD2:12.0:SS
D-1225-033

S

cpy 1 6 H
cpy 1 pg

ENGINEERING CHANGE NOTICE ESSENTIAL

Page 1 of 2

1. ECN 653080

Proj. ECN

2. ECN Category (mark one)	3. Originator's Name, Organization, MSIN, and Telephone No.	4. USQ Required?	5. Date
Supplemental [ ] Direct Revisio [ ] Change ECN [ ] Temporary [X] Standby [ ] Supersedure [ ] Cancel/Void [ ]	DE SCULLY/32900/S6-72/372-3592	[ ] Yes [X] No	09/24/99
	6. Project Title/No./Work Order No. EVAPORATOR pH PROBE REMOVED	7. Bldg./Sys./Fac. No. 2025E/60I	8. Approval Designator NA
	9. Document Numbers Changed by this ECN (includes sheet no. and rev.) H-2-89335, REV 11 SH 1	10. Related ECN No(s). 646658L 651583	11. Related PO No. NONE

12a. Modification Work	12b. Work Package No.	12c. Modification Work Complete	12d. Restored to Original Condition (Temp. or Standby ECN only)
[X] Yes (fill out Blk. 12b) ~~[X]~~ No (NA Blks. 12b, 12c, 12d) DES 9/27/99	~~none~~ EL-99-00314 DES 9/27/99	DE Scully 9/27/99 Design Authority/Cog. Engineer Signature & Date	Design Authority/Cog. Engineer Signature & Date

13a. Description of Change

13b. Design Baseline Document? [X] Yes [ ] No

Evaporator brine pH probe AE-60I135 has been removed from the recirculation line. A stainless steel pipe plug has been installed in its place.

AIT-60I135, the pH meter transmitter, has been left electrically ~~isolated.~~ active DES 9/24/99

The MCS graphic for the evaporator brine pH, AI-60I135, has been altered to indicate "out of service."

14a. Justification (mark one)

Criteria Change	[ ]	Design Improvement	[ ]	Environmental	[ ]	Facility Deactivation	[ ]
As-Found	[X]	Facilitate Const	[ ]	Const. Error/Omission	[ ]	Design Error/Omission	[ ]

14b. Justification Details

Enivronmental conditions at the probe location in the brine (high solids content, high temperature) are such that probe life was unacceptably short.

Temporary ECN 646658L was erroneously superceded via ECN 651583. This temporary ECN has been written to cover the temporary installation until the permanent modification in ECN 651583 is "work complete."

15. Distribution (include name, MSIN, and no. of copies)

TH Calihan	S6-71	1	DE Scully	S6-72	1*
NJ Sullivan	S6-72	1	DK Smith	S6-71	1
Mark Bowman	S6-72	1	CD Skogley	S6-72	1

*adv cy

RELEASE STAMP

SEP 27 1999

DATE:

HANFORD RELEASE

STA: 30

ID: 18

A-7900-013-2 (05/96) GEF095

A-7900-013-1

ENGINEERING CHANGE NOTICE	Page 2 of 2	1. ECN (use no. from pg. 1) 653080 L

16. Design Verification Required	17. Cost Impact		N/A		18. Schedule Impact (days)
	ENGINEERING			CONSTRUCTION	N/A
[ ] Yes	Additional	[ ] $		Additional [ ] $	Improvement [ ]
[X] No	Savings	[ ] $		Savings [ ] $	Delay [ ]

19. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 13. Enter the affected document number in Block 20.

SDD/DD	[ ]	Seismic/Stress Analysis	[ ]	Tank Calibration Manual	[ ]
Functional Design Criteria	[ ]	Stress/Design Report	[ ]	Health Physics Procedure	[ ]
Operating Specification	[ ]	Interface Control Drawing	[ ]	Spares Multiple Unit Listing	[ ]
Criticality Specification	[ ]	Calibration Procedure	[ ]	Test Procedures/Specification	[ ]
Conceptual Design Report	[ ]	Installation Procedure	[ ]	Component Index	[ ]
Equipment Spec.	[ ]	Maintenance Procedure	[ ]	ASME Coded Item	[ ]
Const. Spec.	[ ]	Engineering Procedure	[ ]	Human Factor Consideration	[ ]
Procurement Spec.	[ ]	Operating Instruction	[ ]	Computer Software	[ ]
Vendor Information	[ ]	Operating Procedure	[ ]	Electric Circuit Schedule	[ ]
OM Manual	[ ]	Operational Safety Requirement	[ ]	ICRS Procedure	[ ]
FSAR/SAR	[ ]	IEFD Drawing	[ ]	Process Control Manual/Plan	[ ]
Safety Equipment List	[ ]	Cell Arrangement Drawing	[ ]	Process Flow Chart	[ ]
Radiation Work Permit	[ ]	Essential Material Specification	[ ]	Purchase Requisition	[ ]
Environmental Impact Statement	[ ]	Fac. Proc. Samp. Schedule	[ ]	Tickler File	[ ]
Environmental Report	[ ]	Inspection Plan	[ ]	N/A	[ ]
Environmental Permit	[ ]	Inventory Adjustment Request	[ ]		[ ]

20. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

Document Number/Revision	Document Number/Revision	Document Number Revision

21. Approvals

	Signature	Date
Design Authority DE Scully	DE Scully	9/24/99
Cog. Eng. DE Scully	DE Scully	9/24/99
Cog. Mgr. MJ Sullivan (OSE Mgr)	MJ Sullivan	9-24-99
QA		
Safety		
Environ.		
Other		
OSE Lead		

Notes:
1) Review and approval of this ECN by the OSE Mgr will constitute design review.

	Signature	Date
Design Agent DE Scully	DE Scully	9/24/99
PE		
QA		
Safety		
Design		
Environ.		
Other		

DEPARTMENT OF ENERGY

ADDITIONAL

S

CPF 1 8
1 PF 7 4
1 PF

ENGINEERING CHANGE NOTICE

Page 1 of 8

1. ECN 651583

Proj. ECN

2. ECN Category (mark one)	3. Originator's Name, Organization, MSIN, and Telephone No.	4. USQ Required?	5. Date
Supplemental ○ Direct Revision ○ Change ECN ○ Temporary ○ Standby ○ Supersedure ◉ Cancel/Void ○	S.D. Ellingson FDNW 373-1151	○ Yes ◉ No	8/10/99
	6. Project Title/No./Work Order No. Distillate pH Monitor Installation on Evaporator Skid	7. Bldg./Sys./Fac. No. 2025E	8. Approval Designator Q
	9. Document Numbers Changed by this ECN (includes sheet no. and rev.) See block 13a	10. Related ECN No(s). 646658L	11. Related PO No. n/a

12a. Modification Work	12b. Work Package No.	12c. Modification Work Completed	12d. Restored to Original Condition (Temp. or Standby ECNs only)
◉ Yes (fill out Blk. 12b) ○ No (NA Blks. 12b, 12c, 12d)	EL-99-00314	Design Authority/Cog. Engineer Signature & Date	n/a Design Authority/Cog. Engineer Signature & Date

13a. Description of Change — 13b. Design Baseline Document? ◉ Yes ○ No

This ECN Supersedes ECN-646658L In Its Entirety!

1. H-2-89335, Sht 1, Rev 11
   Remove pH monitor "AE-60I-135" and instrumentation from line 1"-60I-155-166H as shown on Page 3 this ECN.

2. H-2-88987, Sht 1, Rev 16
   Add pH monitor "AE-60I-135", instrumentation and orifice FO-60I-111 to line EP-103-SS6-1" as shown on Page 4 this ECN.

3. H-2-89183, Sht 1, Rev 4
   Add field reference note to field of drawing as shown on Page 5 this ECN.
   Add "Detail 1" to field of drawing as shown on Page 6 this ECN.

   Review and approval of this ECN by the OSE manager constitutes design review.

   See EDT 601865 for Orifice Sizing Design Analysis, HNF-4940.

14a. Justification (mark one)	14b. Justification Details
Criteria Change ○ Design Improvement ◉ Environmental ○ Facility Deactivation ○ As-Found ○ Facilitate Const. ○ Const. Error/Omission ○ Design Error/Omission ○	Monitoring of the evaporator distillate pH is required to prevent corrosion of vapor compressor internals. This design package depicts the installation of a pH monitor electrode assembly into line EP-103-SS6-1" of the evaporator skid piping system. Coordinate with: Set-Values Basis Document ECN-653078 Software ECN-647197

15. Distribution (include name, MSIN, and no. of copies)

M.W. Bowman	S6-72	S.D. Ellingson	S6-72
T.H. Calihan	S6-71	R.E. Palmer	E6-14
*D.E. Scully	S6-72	J.M. Isdell	B4-39
N.J. Sullivan	S6-72	*B.A. Messinger	B4-39
D.K. Smith	S6-71		
R.M. Szelmeczka	S6-72		
C.D. Skogley	S6-72	*WCC Planning	

* Advanced Copy

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AUG 10 1999
DATE:
STA: 30
HANFORD RELEASE
ID: 18

A-7900-013-1

A-7900-013-2 (10/97)

ENGINEERING CHANGE NOTICE

1. ECN (use no. from pg. 1): 651583

16. Design Verification Required	17. Cost Impact		18. Schedule Impact (days)
	ENGINEERING	CONSTRUCTION	
(●) Yes	Additional ( ) $ n/a	Additional ( ) $ n/a	Improvement ( ) n/a
( ) No	Savings ( ) $ n/a	Savings ( ) $ n/a	Delay ( ) n/a

19. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 13. Enter the affected document number in Block 20.

SDD/DD	☐	Seismic/Stress Analysis	☐	Tank Calibration Manual	☐
Functional Design Criteria	☐	Stress/Design Report	☐	Health Physics Procedure	☐
Operating Specification	☐	Interface Control Drawing	☐	Spares Multiple Unit Listing	☐
Criticality Specification	☐	Calibration Procedure	☐	Test Procedures/Specification	☐
Conceptual Design Report	☐	Installation Procedure	☐	Component Index	☒
Equipment Spec.	☐	Maintenance Procedure	☐	ASME Coded Item	☐
Const. Spec.	☐	Engineering Procedure	☐	Human Factor Consideration	☐
Procurement Spec.	☐	Operating Instruction	☐	Computer Software	☒
Vendor Information	☒	Operating Procedure	☒	Electric Circuit Schedule	☐
OM Manual	☐	Operational Safety Requirement	☐	ICRS Procedure	☐
FSAR/SAR	☐	IEFD Drawing	☒	Process Control Manual/Plan	☐
Safety Equipment List	☐	Cell Arrangement Drawing	☐	Process Flow Chart	☐
Radiation Work Permit	☐	Essential Material Specification	☐	Purchase Requisition	☐
Environmental Impact Statement	☐	Fac. Proc. Samp. Schedule	☐	Tickler File	☐
Environmental Report	☐	Inspection Plan	☐	ARP-60I-001	☒
Environmental Permit	☐	Inventory Adjustment Request	☒	HNF-SD-ETF-OCD-001	☒

20. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

Document Number/Revision	Document Number/Revision	Document Number/Revision
H-2-88987, Sht 1, rev 16		
H-2-89335, Sht 1, rev 11		
H-2-89183, Sht 1, rev 4		

21. Approvals

	Signature	Date		Signature	Date
Design Authority	DS Sully	8/10/99	Design Agent	S. D. Ellingson by DS Sully	8/10/99
Cog. Eng.	DS Sully	8/10/99	PE		
Cog. Mgr. (OSE Mgr.)	MJ Furbush	8-10-99	QA		
QA	Donn R. Schell by DS Sully per telecon	8-10-99	Safety		
Safety			Design		
Environ.			Environ.		
Other			Other		

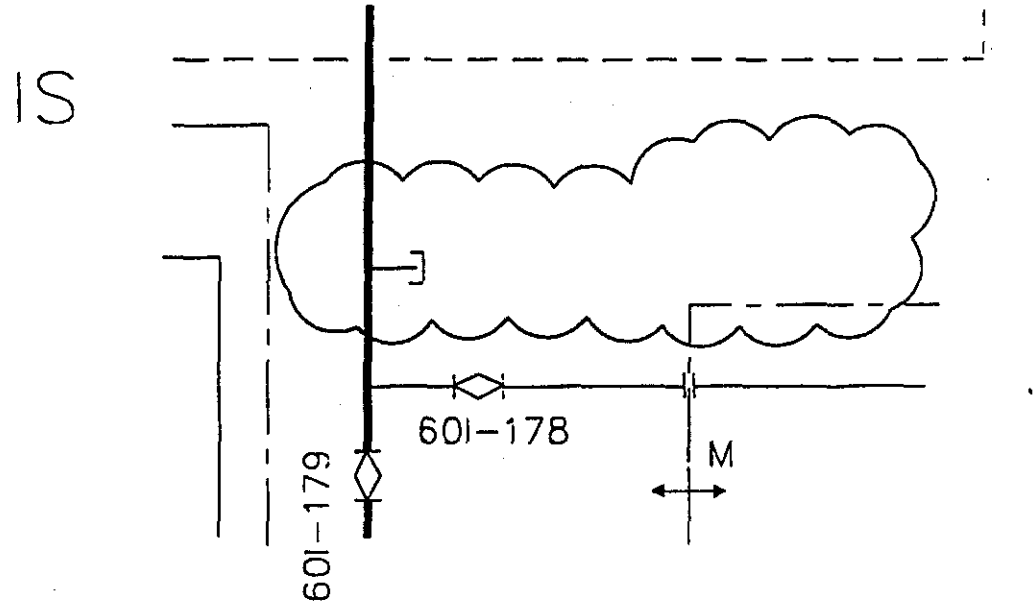
DEPARTMENT OF ENERGY

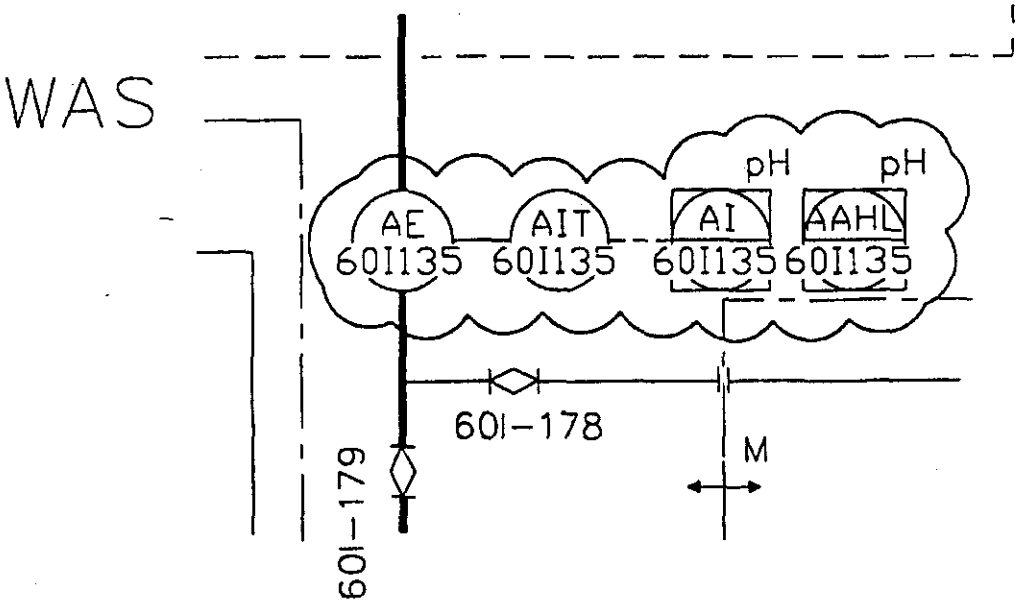
Signature or a Control Number that tracks the Approval Signature

ADDITIONAL

ENGINEERING CHANGE NOTICE CONTINUATION SHEET	DOCUMENT NO. H-2-89335	DATE 8/10/99	ECN 651583

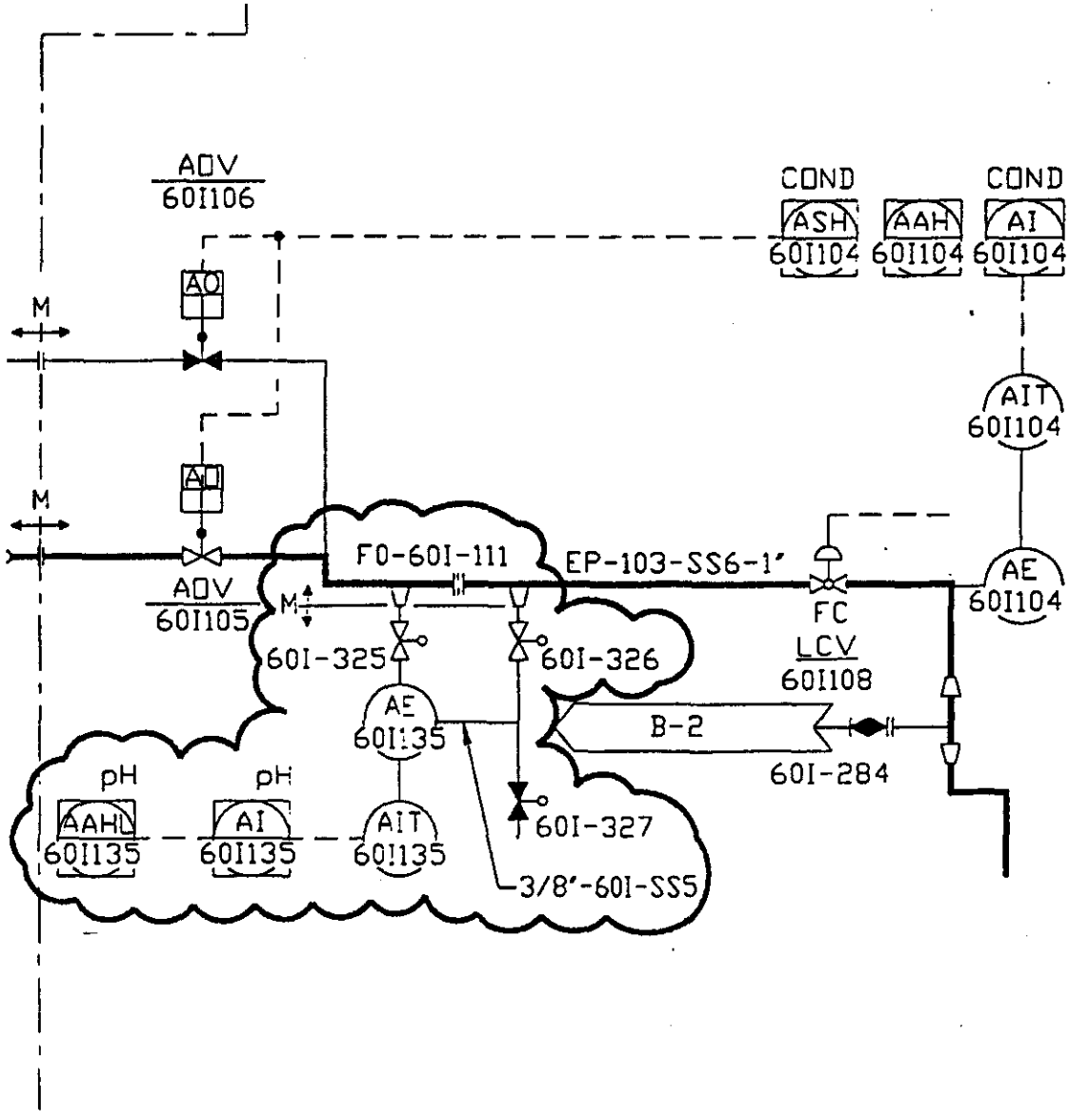
REVISE AS SHOWN BELOW IN CLOUDED AREA. (ZN C4)





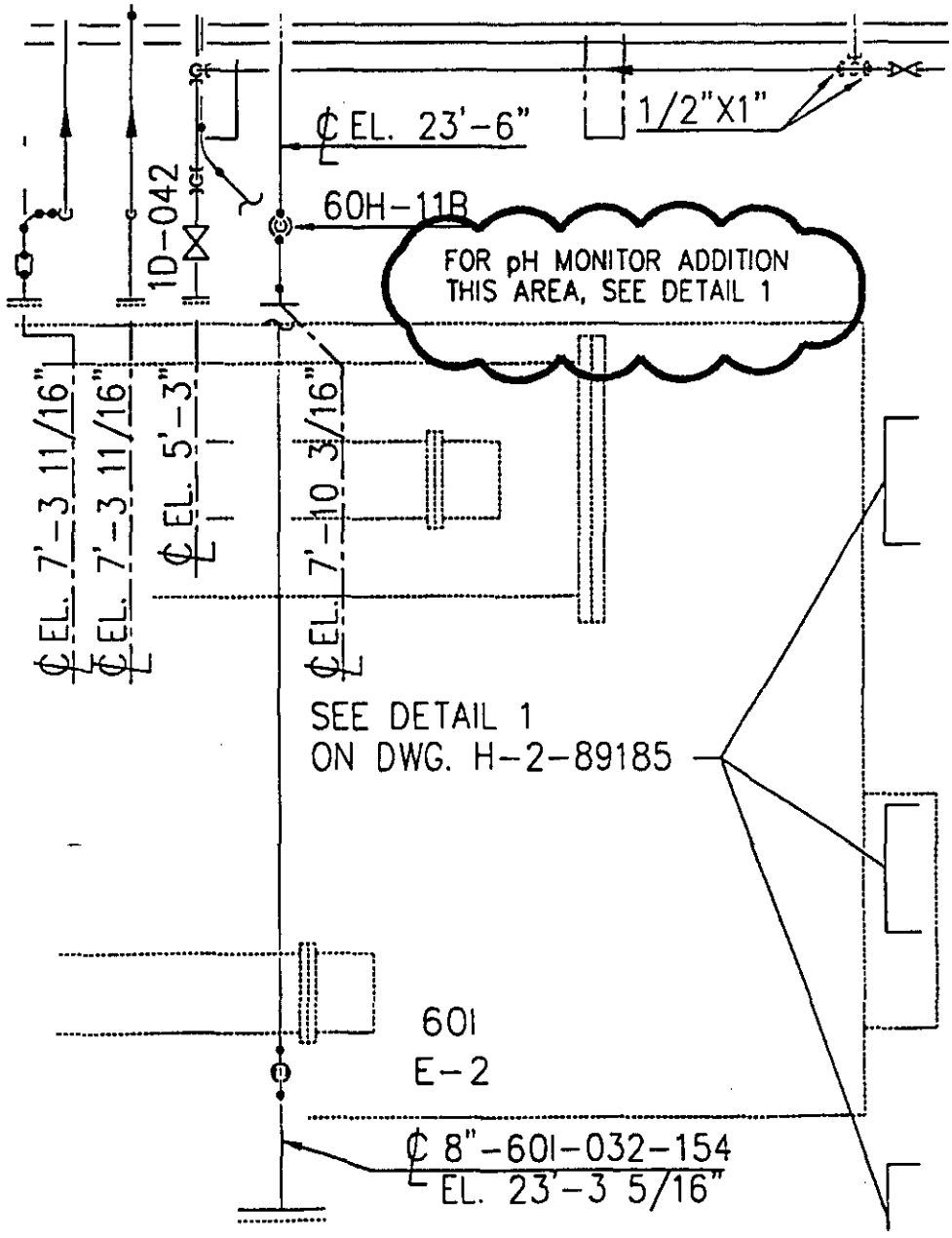
ENGINEERING CHANGE NOTICE CONTINUATION SHEET	DOCUMENT NO. H-2-88987, SH1	DATE 8/10/99	ECN 651583

ADD AS SHOWN BELOW IN CLOUDED AREA, ZN C7



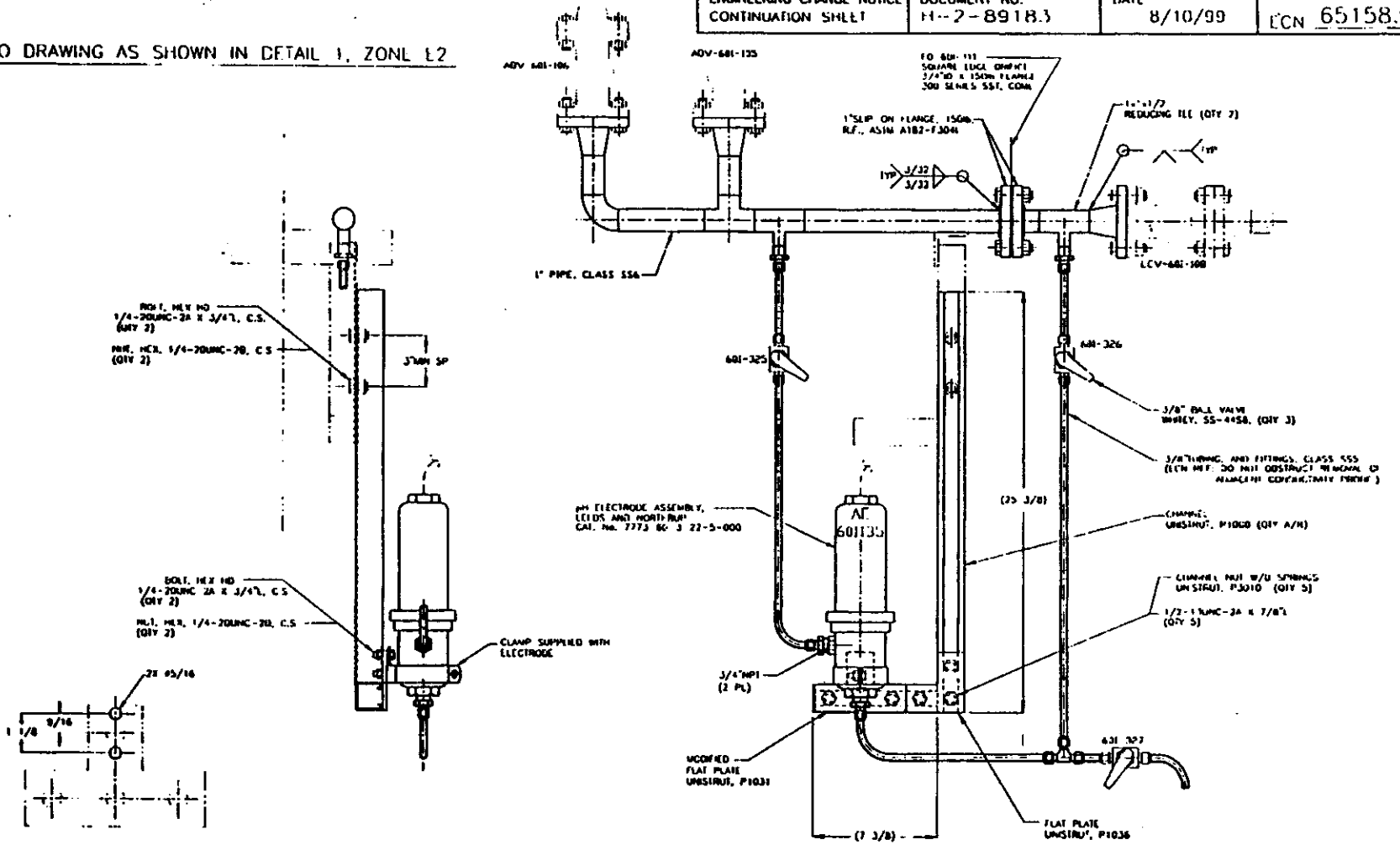
ENGINEERING CHANGE NOTICE CONTINUATION SHEET	DOCUMENT NO. H-2-89183	DATE 8/10/99	ECN 651583

REVISE AS SHOWN BELOW IN CLOUDED AREA. (ZN E6)



ENGINEERING CHANGE NOTICE CONTINUATION SHEET	DOCUMENT NO. H-2-89183	DATE 8/10/99	ECN 65158.3

ADD TO DRAWING AS SHOWN IN DETAIL 1, ZONL L2



MODIFIED UNISTRUT FLAT PLATE

DETAIL 1

REF VI-22366, BDC'S V-135A-684 381 AND 382

ECN Reference Notes. Do Not Add To Drawing

1. Piping, fittings and jointing methods for new stainless steel pipe runs are to meet the requirements of ETF piping specification Class 156 (same as RCC spec Class SS6).

2. Piping, fittings and jointing methods for new stainless steel tubing runs are to meet the requirements of ETF piping specification Class 153T (same as RCC spec Class SS5).

3. Install, inspect and test new piping and tubing in accordance with ASME B31.3-1993 edition and addenda for Category "D" fluid service.

4. Salvage existing pipe insulation for reuse to the extent possible. Re-insulate the replaced 1" sch40 piping only. If new material are required, materials shall be:
   * Insulation, glass or mineral fiber, 1" thick, block type conforming to ASTM C612, Class 2, or molded pipe type conforming to ASTM C547.
   * Aluminum jacket, ASTM B209, alloy 3003, temper H14, ANSI H35.1, .016" thick.
   * Stainless steel bands, .020" thick, 3/8" wide, commercial.

   Note: All materials may be substituted with engineering approved equal products.

5. The design details depicted in this ECN (Page 6) reflect replacement of a short pipe spool piece between valves AOV-60I-105, AOV-60I-106 and LCV-60I-108 in order to incorporate pH monitor installation. Modification of the existing spool piece to incorporate the new tees and orifice flanges only is a field option. Implementation of either approach, ie; complete replacement or modify existing, is the prerogative of the craftsman performing the work.

6. Salvage nuts, bolts and washers from existing flanges for re-use during system reassembly.

7. Orifice plate FO-60I-111 can be commercially procured or fabricated on site. For either case, orifice handle shall be stamped with 1/8" minimum high characters depicting orifice identification (FO-60I-111), flange size (1"-150#) and internal diameter (.75").

ATTACHMENT 2, AUTHORIZATION BASES REVIEW FORM

Part A:

REFERENCE ITEM # ECN 651583 (Proposed Change/Discovery) (circle one)

APPROVAL DESIGNATOR Q

TITLE Distillate pH Monitor Installation on Evaporator Skid

DESCRIPTION Electrode assembly will be installed in a newly fabricated slipstream of cooled distillate.

M S Sully — Originator Signature — 8/10/99 — Date

Part B:

Does the referenced item:

		(check one)
A.	Increase risk from a hazard - to the workers &/or public beyond that previously analyzed, evaluated, and documented in the Authorization Bases?	(NO) Yes/Maybe__
B.	Reduce the reliability or effectiveness of features, controls, procedures, or processes used to mitigate hazards?	(NO) Yes/Maybe__
C.	Introduce a hazard not evaluated in the Authorization Bases?	(NO) Yes/Maybe__
D.	Reflect new information on existing hazards beyond that currently documented in the Authorization Bases?	(NO) Yes/Maybe__

DETERMINATION BASES: Record complete justification and reference information below. Use Attachment 3 for continuations. Maintain with submittal package.

This installation merely splits a stream of cooled (122°F) distillate for the on-line measurement of pH. Piping will be installed, inspected, and tested in accordance with ASME B31.3 for category "D" fluid service.

PABI, Item Remains Open	No Impact, ABR Closed		
☐	☒	M S Sully — Authorization Bases Evaluator	8/10/99 — Date
☐	☐	Technical Support Group Manager	Date

This document is a facility record when completed.

Page ___ of ___

S

ENGINEERING CHANGE NOTICE ESSENTIAL

1. ECN 648765

Proj. ECN

CIPF 18

2. ECN Category (mark one)	3. Originator's Name, Organization, MSIN, and Telephone No.	4. USQ Required?	5. Date
Supplemental [X] Direct Revision [] Change ECN [] Temporary [] Standby [] Supersedure [] Cancel/Void []	CARMICHAEL, SL, 32730, S6-74, 372-2272	[] Yes [X] No	08/17/98
	6. Project Title/No./Work Order No. REMOVE INSTRUMENTS FROM THIN FILM DRYER ROOM	7. Bldg./Sys./Fac. No. 2025E/60J	8. Approval Designator N/A
	9. Document Numbers Changed by this ECN (includes sheet no. and rev.) SEE BLOCK 13A	10. Related ECN No(s). N/A	11. Related PO No. N/A

12a. Modification Work	12b. Work Package No.	12c. Modification Work Complete	12d. Restored to Original Condition (Temp. or Standby ECN only)
[X] Yes (fill out Blk. 12b) [] No (NA Blks. 12b, 12c, 12d)	EL-96-00561/M	Design Authority/Cog. Engineer Signature & Date	N/A Design Authority/Cog. Engineer Signature & Date

13a. Description of Change — 13b. Design Baseline Document? [X] Yes [] No

H-2-89364 SH.1 REV.3 & H-2-89364 SH.4 REV.1:
REMOVE TEMPERATURE TRANSMITTERS, TT-60J-011, TT-60J-018, TT-60J-020 AND TT-60J038 FROM THE THIN FILM DRYER ROOM AND INSTALL THEM ON THE UPPER DECK OF THE THIN FILM DRYER. THE TEMPERATURE ELEMENTS FOR THESE TRANSMITTERS WILL REMAIN IN THE THIN FILM DRYER ROOM AT THEIR PRESENT LOCATIONS.
H-2-89364 SH.1 REV.3 & H-2-89319 SH.1 REV.1:
THE HVAC ROOM TEMPERATURE TRANSMITTER WILL BE MOVED TO THE OUTSIDE WALL BY THE STAIRS WITH THE SENSOR REMAINING IN THE THIN FILM DRYER ROOM.
H-2-88989 SH.1 REV.12 & H-2-89364 SH.2 REV.1:
REMOVE FLOW TRANSMITTER FT-60J-035 FROM THE THIN FILM DRYER ROOM AND LOCATE IT ON THE UPPER DECK OF THE THIN FILM DRYER ON THE POLISHER SIDE. THIS REQUIRES CUTTING THE CONDENSATER DISCHARGE LINE TO THE SURGE (1"-60J-145-153S) AND WELDING IN FLANGES FOR THE TRANSMITTER ORFICE PLATE. THE EXISTING ORFICE WILL BE REMOVED AND A SPACER OR SPOOL PIECE INSTALLED.

14a. Justification (mark one)

Criteria Change	[]	Design Improvement	[X]	Environmental	[]	Facility Deactivation	[]
As-Found	[]	Facilitate Const	[]	Const. Error/Omission	[]	Design Error/Omission	[]

14b. Justification Details

CHANGES MADE TO ALLOW EASIER CALIBRATION OF INSTRUMENTS AND LIMIT THE REQUIRED ENTERIES INTO A RADIOLOGICALLY CONTROLLED AREA.

15. Distribution (include name, MSIN, and no. of copies)

N.J.SULLIVAN	S6-72	1	J.E.GEARY	S6-71	1
A.K.YOAKUM	S6-71	1	J.M.ISDELL	G3-17	1*
D.L.FLYCKT	S6-72	1	D.E.SCULLY	S6-72	1
S.L.CARMICHAEL	S6-74	1 *	WCC PLANNING	S6-72	1*
M.W.BOWMAN	S6-72	1	R.J.HUTH	S6-72	1

* ADVANCED COPY

RELEASE STAMP

AUG 18 1998

DATE: HANFORD RELEASE ID:

STA: 30 25

A-7900-013-2 (05/96) GEF095

A-7900-013-1

ENGINEERING CHANGE NOTICE

1. ECN (use no. from pg. 1) 648765

16. Design Verification Required	17. Cost Impact						18. Schedule Impact (days)	
	ENGINEERING			CONSTRUCTION				
[X] Yes	Additional	[NA]	$	Additional	[NA]	$	Improvement	[NA]
[] No	Savings	[NA]	$	Savings	[NA]	$	Delay	[NA]

19. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 13. Enter the affected document number in Block 20.

SDD/DD	[NA]	Seismic/Stress Analysis	[NA]	Tank Calibration Manual	[NA]
Functional Design Criteria	[NA]	Stress/Design Report	[NA]	Health Physics Procedure	[NA]
Operating Specification	[NA]	Interface Control Drawing	[NA]	Spares Multiple Unit Listing	[NA]
Criticality Specification	[NA]	Calibration Procedure	[NA]	Test Procedures/Specification	[NA]
Conceptual Design Report	[NA]	Installation Procedure	[NA]	Component Index	[NA]
Equipment Spec.	[NA]	Maintenance Procedure	[NA]	ASME Coded Item	[NA]
Const. Spec.	[NA]	Engineering Procedure	[NA]	Human Factor Consideration	[NA]
Procurement Spec.	[NA]	Operating Instruction	[NA]	Computer Software	[NA]
Vendor Information	[NA]	Operating Procedure	[NA]	Electric Circuit Schedule	[NA]
OM Manual	[NA]	Operational Safety Requirement	[NA]	ICRS Procedure	[NA]
FSAR/SAR	[NA]	IEFD Drawing	[NA]	Process Control Manual/Plan	[NA]
Safety Equipment List	[NA]	Cell Arrangement Drawing	[NA]	Process Flow Chart	[NA]
Radiation Work Permit	[NA]	Essential Material Specification	[NA]	Purchase Requisition	[NA]
Environmental Impact Statement	[NA]	Fac. Proc. Samp. Schedule	[NA]	Tickler File	[NA]
Environmental Report	[NA]	Inspection Plan	[NA]		[NA]
Environmental Permit	[NA]	Inventory Adjustment Request	[NA]		[NA]

20. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

Document Number/Revision	Document Number/Revision	Document Number Revision
NONE		

21. Approvals

	Signature	Date		Signature	Date
Design Authority D.E.SCULLY	[signature] for DES	8-17-98	Design Agent	[signature] for DES	8-17-98
Cog. Eng. D.E.SCULLY	[signature] for DES	8-17-98	PE		
Cog. Mgr. N.J.SULLIVAN	[signature]	8-17-98	QA		
QA			Safety		
Safety			Design		
Environ.			Environ.		
Other			Other		
INFORMAL REVIEW	C. McTourne	8/17/98			
INFORMAL REVIEW	S. L. Campbell	8/17/98			

DEPARTMENT OF ENERGY
Signature or a Control Number that tracks the Approval Signature

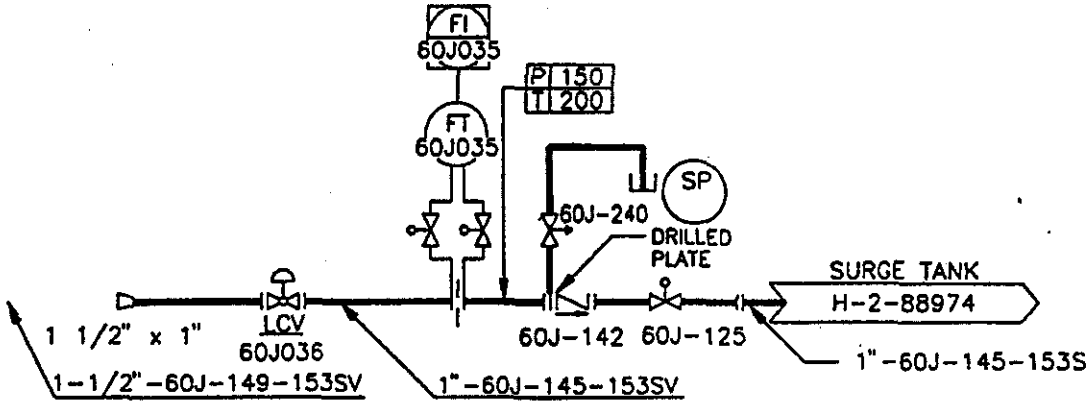
ADDITIONAL

^C

^GMACPATH^GEF1000^G

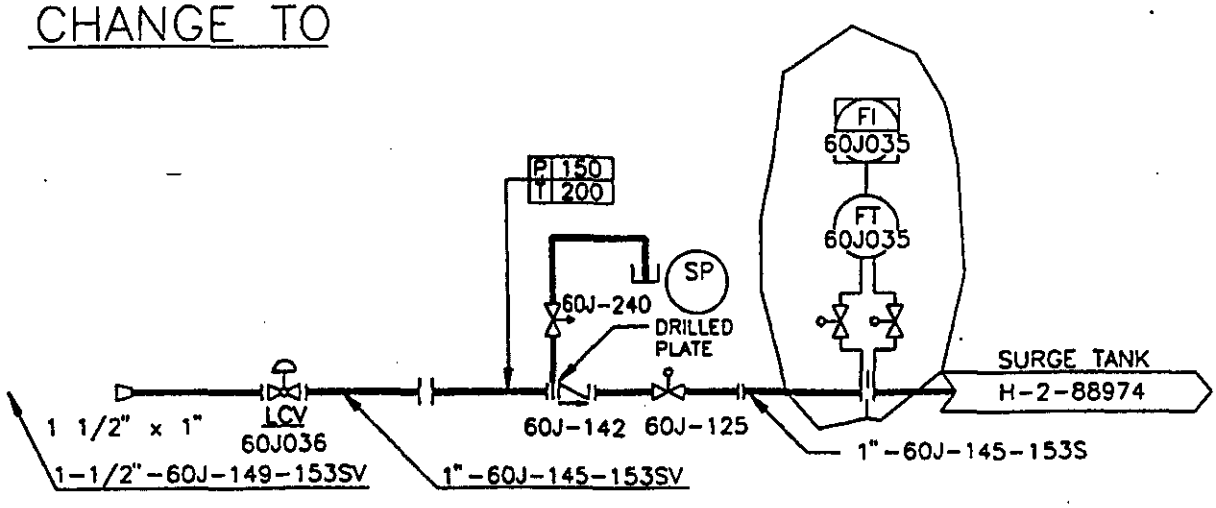
H-2-88989

WAS



DISTILLATE CONDENSER
2025E-60J-CND-01

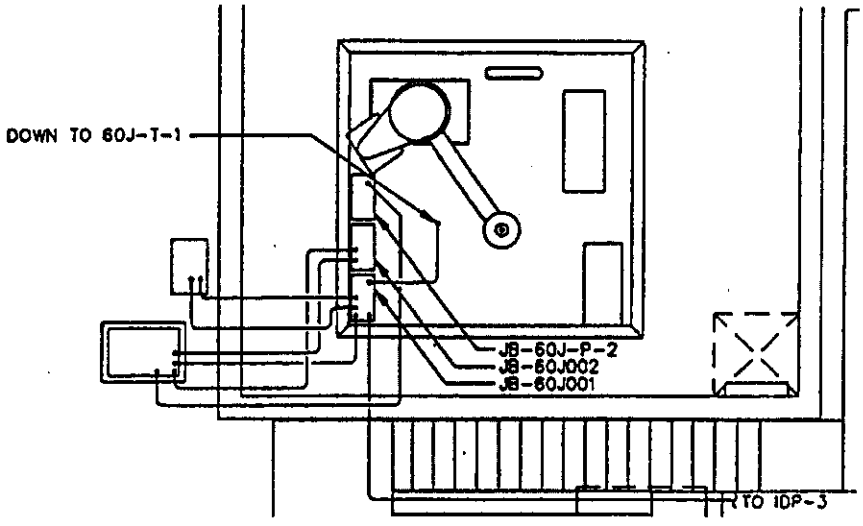
CHANGE TO



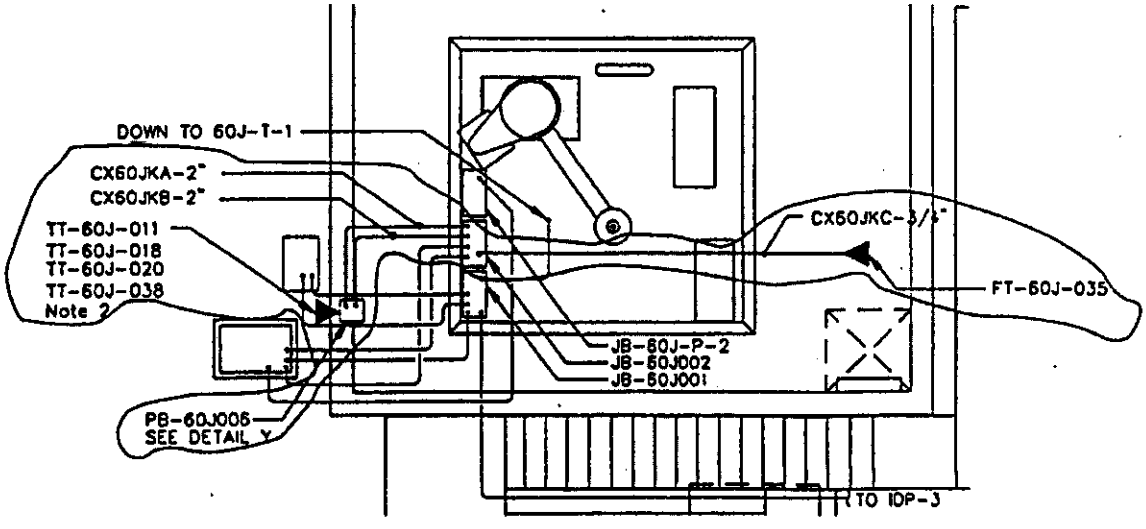
DISTILLATE CONDENSER
2025E-60J-CND-01

H-2-89364 Sht.2

WAS



Change To



ENGINEERING CHANGE NOTICE CONTINUATION SHEET Page 5 of 10

ECN 648765 Date 08/17/98

H-2-89364 Sht.2

WAS

NOTE:

FOR PULLBOX CONDUIT DETAILS,
SEE SHEETS 3 & 4 OF THIS DRAWING.

CHANGE TO

NOTE:

1. FOR PULLBOX CONDUIT DETAILS,
   SEE SHEETS 3 & 4 OF THIS DRAWING.
2. TEMPERATURE SENSORS ARE LOCATED INSIDE TFD ROOM.

A-7900-013-4 (04/94) GEF094

ENGINEERING CHANGE NOTICE CONTINUATION SHEET

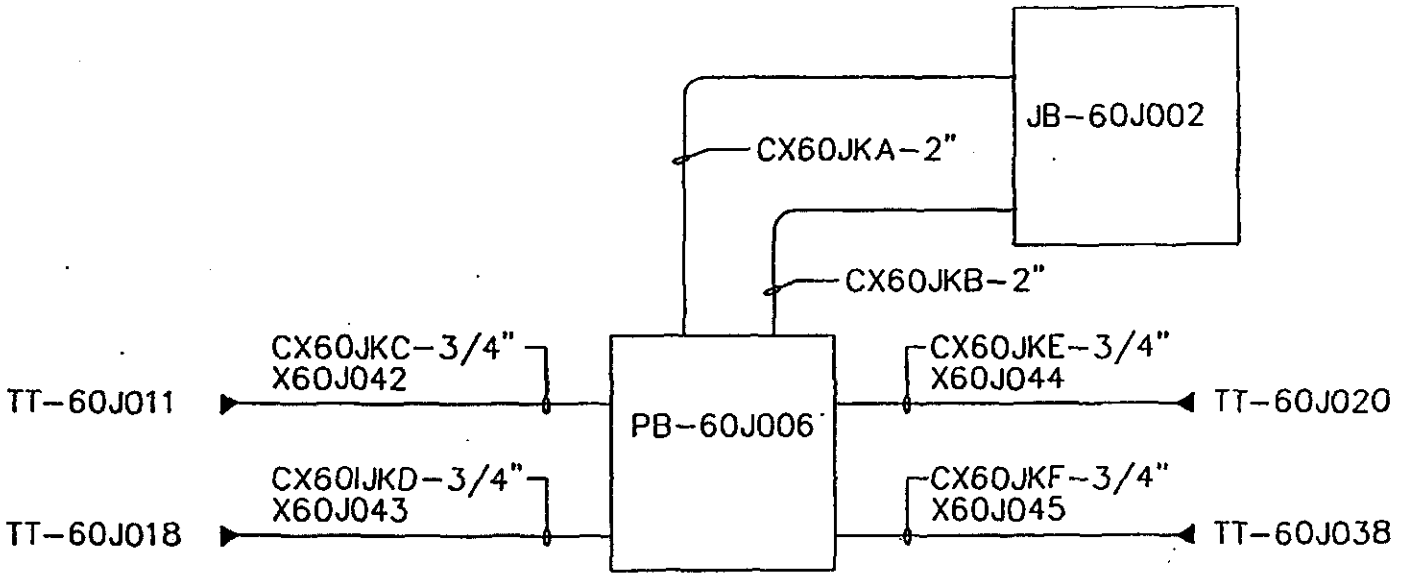
ECN 648765

Date 08/17/98

Page 6 of 10

H-2-89364 Sht.4

ADD



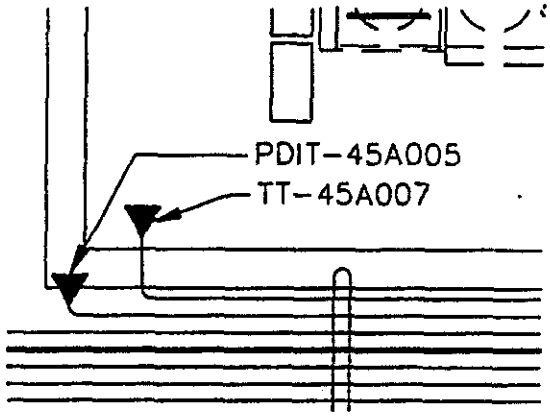
DETAIL Y

N.T.S.

A-7900-013-4 (04/94) GEF094

H-2-89364 Sht.1

WAS



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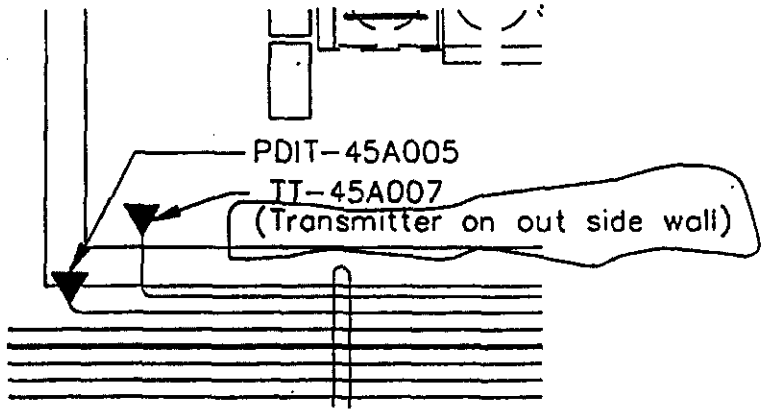
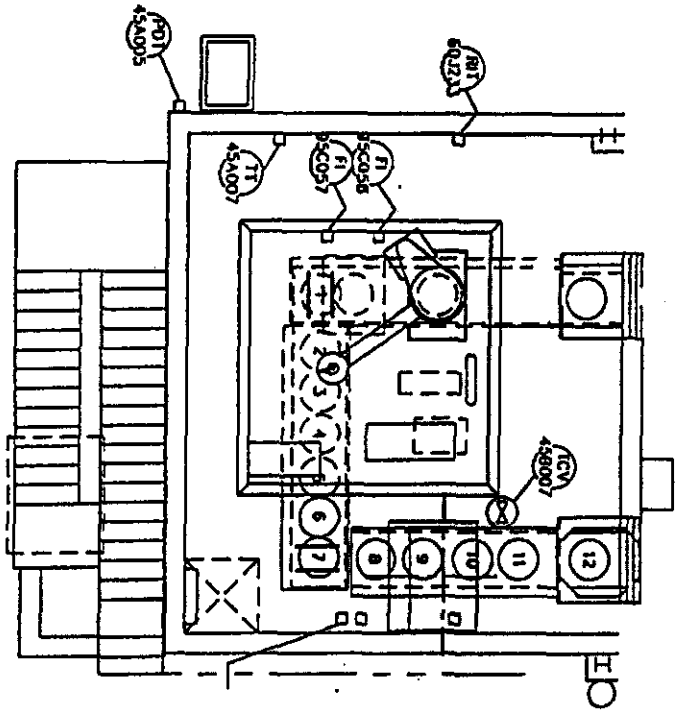
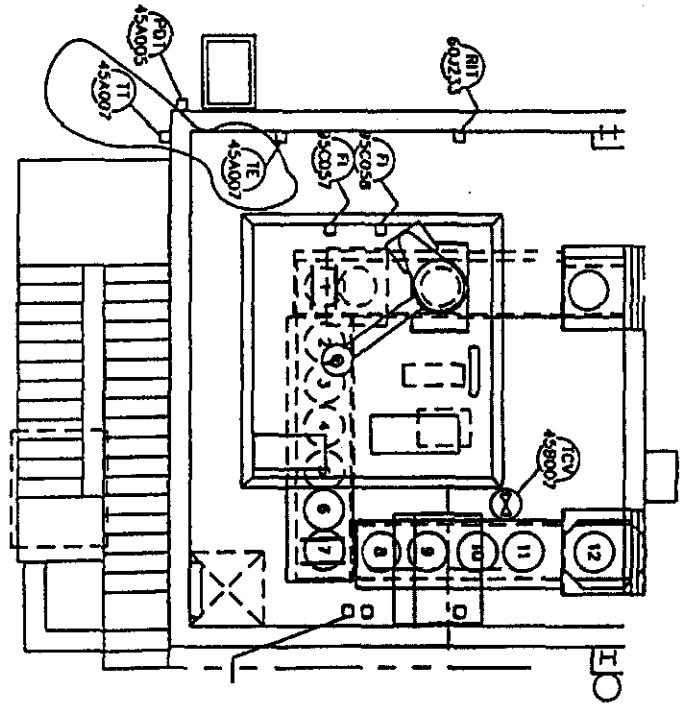


H-2-89319

WAS



CHANGE TO



INFORMATION ONLY: Add to the ETF Cable Schedule:

	CABLE NO.	CABLE TYPE	FROM	TO	SERVICE	WIRING DIAGRAM	CABLE LENGTH
1.	X60J042	1TSP18	JB-60J002	TT-60J011	INST		20
	RACEWAYS: CX60JKA,CX60JKC						
2.	X60J043	1TSP18	JB-60J002	TT-60J018	INST		20
	RACEWAYS: CX60JKA, CX60JKD						
3.	X60J044	1TSP18	JB-60J002	TT-60J020	INST		20
	RACEWAYS: CX60JKA, CX60JKE						
4.	X60J045	1TSP18	JB-60J002	TT-60J038	INST		20
	RACEWAYS: CX60JKA, CX60JKF						

INFORMATION ONLY: Add to the ETF Raceway Schedule:

	RACEWAY NO.	RACEWAY TYPE	FROM	TO	LENGTH (FT)	PERCENT FILL	REMARKS
5.	CX60JKA	C200R	JB-60J002	PB-60J006	15	20%	
	CABLES: X60J042, X60J043, X60J044, X60J045						
6.	CX60JKB	C200R	JB-60J002	PB-60J006	15	20%	
	CABLES: TE-60J011, TE-60J018, TE-60J020, TE-60J038						
7.	CX60JKC	C075R	PB-60J006	TT-60J011	5	30%	
	CABLES: X60J042, TE-60J011						
8.	CX60JKD	C075R	PB-60J006	TT-60J018	5	30%	
	CABLES: X60J043, TE-60J018						

9.

CX60JKE	C075R	PB-60J006	TT-60J020	5	30%	
CABLES: X60J044, TE-60J020						

10.

CX60JKF	C075R	PB-60J006	TT-60J038	5	30%	
CABLES: X60J045, TE-60J038						

ENGINEERING CHANGE NOTICE

ESSENTIAL

Page 1 of 5

1. ECN 656781L

Proj. ECN

2. ECN Category (mark one)	3. Originator's Name, Organization, MSIN, and Telephone No.	4. USQ Required?	5. Date
Supplemental [ ] Direct Revision [ ] Change ECN [ ] Temporary [X] Standby [ ] Supersedure [ ] Cancel/Void [ ]	DE SCULLY/3M500/S6-72/372-3592	[ ] Yes [X] No	06/16/00
	6. Project Title/No./Work Order No.	7. Bldg./Sys./Fac. No.	8. Approval Designator
	Spool Pieces for Dryer Feed Preheater 60J-E-3	2025E/60J	NA
	9. Document Numbers Changed by this ECN (includes sheet no. and rev.)	10. Related ECN No(s).	11. Related PO No.
	See Block 13a below	656828L	NONE

12a. Modification Work	12b. Work Package No.	12c. Modification Work Complete	12d. Restored to Original Condition (Temp. or Standby ECN only)
[X] Yes (fill out Blk. 12b) [ ] No (NA Blks. 12b, 12c, 12d)	EL-00-00317	Design Authority/Cog. Engineer Signature & Date	Design Authority/Cog. Engineer Signature & Date

13a. Description of Change 13b. Design Baseline Document? [X] Yes [ ] No

H-2-88989, sht 1, rev 16
Remove dryer feed preheater 60J-E-3. Provide a 3/4" diameter schedule 40 SS304 screwed pipe spool piece for the feed line. Provide a 3/4" diameter schedule 80 carbon steel screwed pipe spool piece for the steam line. See p. 4 of this ECN.

Install, inspect, and test per ASME B31.3 for Category D service for the dryer feed line and ASME B31.1 for the steam line.

H-2-89302, sht 172, rev 1
Remove definition of VD435195 per page 5 of this ECN. This removes alarms and dryer trip on low dryer feed temperature.

HNF-SD-ETF-OCD-001, rev 5, Table 19, p. 48 For TIC-60J028, delete "AL: 100 °F Alarm - Stop Concentrate Feed Pump."

14a. Justification (mark one)

Criteria Change	[X]	Design Improvement	[ ]	Environmental	[ ]	Facility Deactivation	[ ]
As-Found	[ ]	Facilitate Const	[ ]	Const. Error/Omission	[ ]	Design Error/Omission	[ ]

14b. Justification Details

The dryer feed preheater 60J-E-3 is plugged with solidified dryer feed salts precipitated from the groundwater feed. This is likely the result of accumulation over years of operation. From a process standpoint this equipment is deemed non-essential and can be temporarily removed.

15. Distribution (include name, MSIN, and no. of copies)

MC Teats	S6-72	1*	DE Scully	S6-72	1*
NJ Sullivan	S6-72	1	ST Willett	S6-71	1*
MW Bowman	S6-72	1	CD Skogley	S6-72	1
WPP Planning		1*	JM Isdell	B4-39	1*
DL Flyckt	S6-71	1	JL Foster	S6-71	1
RW Szelmeczka	S6-72	1	*adv cy		

RELEASE STAMP
JUN 16 2000
DATE:
STA: 30
HANFORD RELEASE
ID 18

A-7900-013-2 (05/96) GEF095

A-7900-013-1

ENGINEERING CHANGE NOTICE	Page 2 of 5	1. ECN (use no. from pg. 1) 656781L

16. Design Verification Required	17. Cost Impact				18. Schedule Impact (days)	
	ENGINEERING	N/A	CONSTRUCTION		N/A	
[X] Yes	Additional	[] $	Additional	[] $	Improvement	[]
[] No	Savings	[] $	Savings	[] $	Delay	[]

19. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 13. Enter the affected document number in Block 20.

SDD/DD	[]	Seismic/Stress Analysis	[]	Tank Calibration Manual	[]
Functional Design Criteria	[]	Stress/Design Report	[]	Health Physics Procedure	[]
Operating Specification	[]	Interface Control Drawing	[]	Spares Multiple Unit Listing	[]
Criticality Specification	[]	Calibration Procedure	[]	Test Procedures/Specification	[]
Conceptual Design Report	[]	Installation Procedure	[]	Component Index	[]
Equipment Spec.	[]	Maintenance Procedure	[]	ASME Coded Item	[]
Const. Spec.	[]	Engineering Procedure	[]	Human Factor Consideration	[]
Procurement Spec.	[]	Operating Instruction	[]	Computer Software	[]
Vendor Information	[]	Operating Procedure	[X]	Electric Circuit Schedule	[]
OM Manual	[]	Operational Safety Requirement	[]	ICRS Procedure	[]
FSAR/SAR	[]	IEFD Drawing	[]	Process Control Manual/Plan	[]
Safety Equipment List	[]	Cell Arrangement Drawing	[]	Process Flow Chart	[]
Radiation Work Permit	[]	Essential Material Specification	[]	Purchase Requisition	[]
Environmental Impact Statement	[]	Fac. Proc. Samp. Schedule	[]	Tickler File	[]
Environmental Report	[]	Inspection Plan	[]		[]
Environmental Permit	[]	Inventory Adjustment Request	[]		[]

20. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

Document Number/Revision	Document Number/Revision	Document Number Revision
POP-60J-001, Q-10		

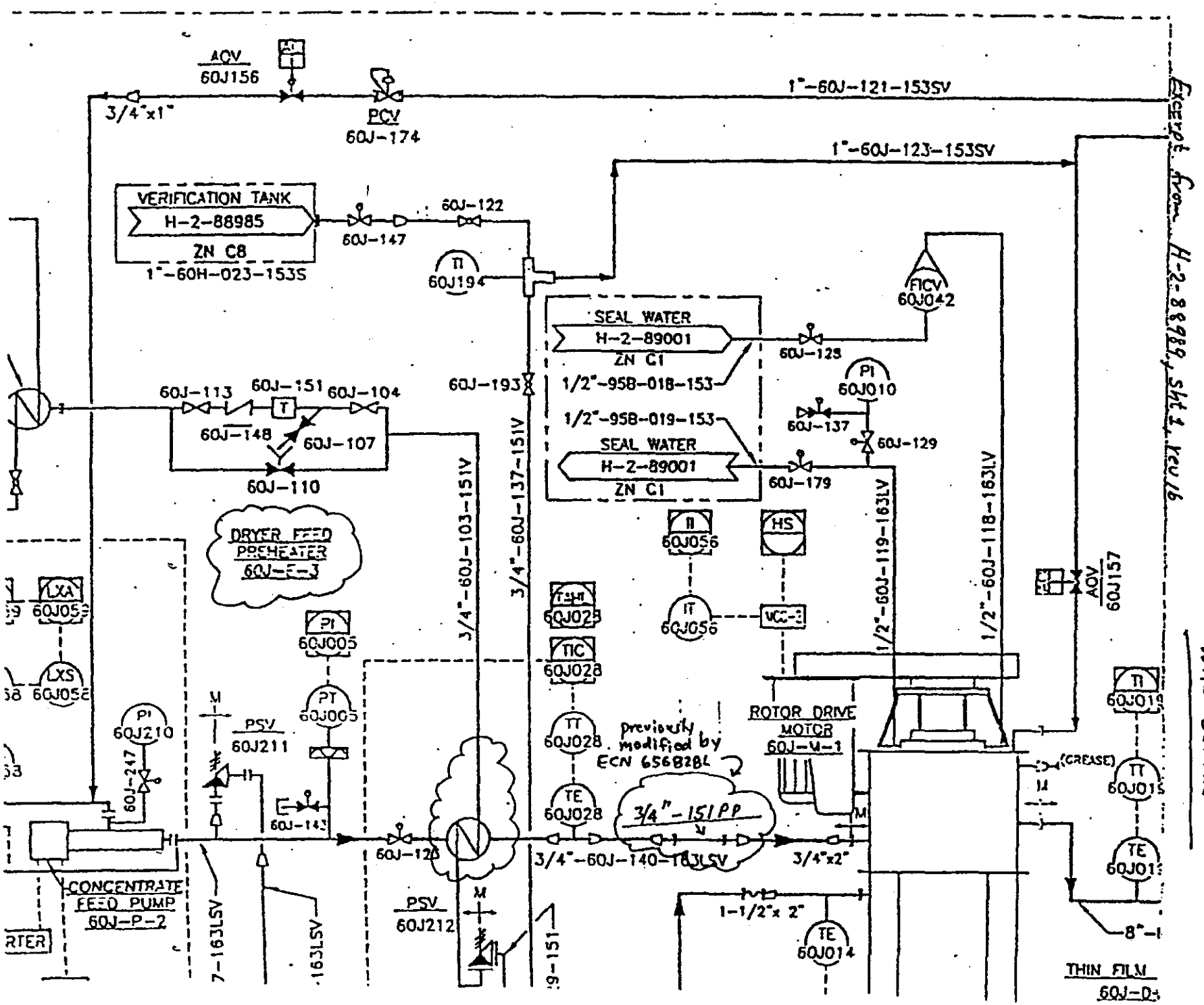
21. Approvals

	Signature	Date		Signature	Date
Design Authority ST Willett	ST Willett	6/16/00	Design Agent DE Scully	DE Scully	6/16/00
Cog. Eng. ST Willett	ST Willett	6/16/00	PE		
Cog. Mgr. MJ Sullivan	MJ Sullivan	6-16-00	QA		
QA			Safety		
Safety			Design		
Environ.			Environ.		
Other			Other (MCS Cog. Engr.) MC Scott		6/16/00
Design Verification (Informal Review)		6-16-00			

Notes:

DEPARTMENT OF ENERGY

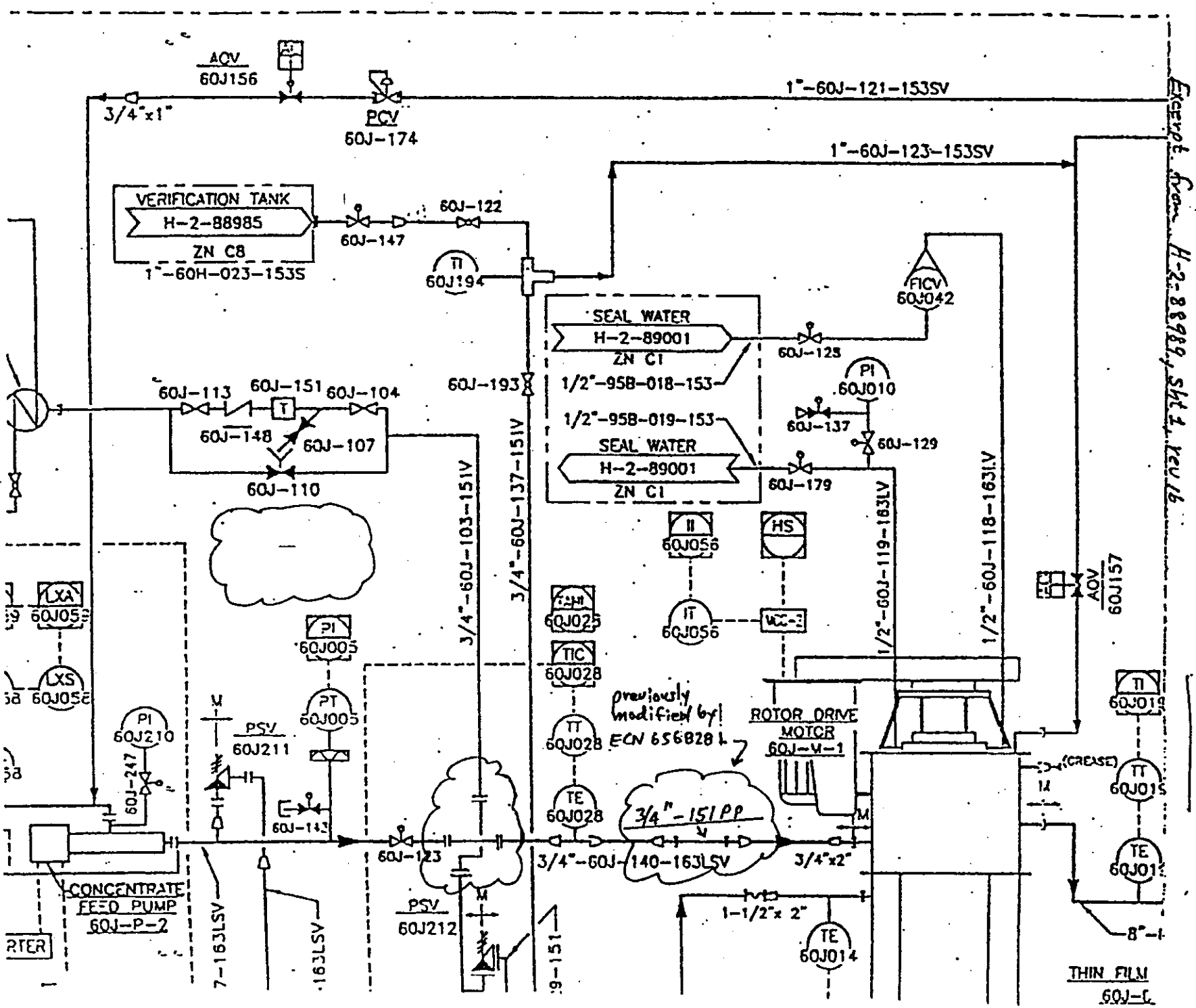
ADDITIONAL



Except from H-2-88989, sht 1, rev 16

ECN 656781L

WAS BEFORE

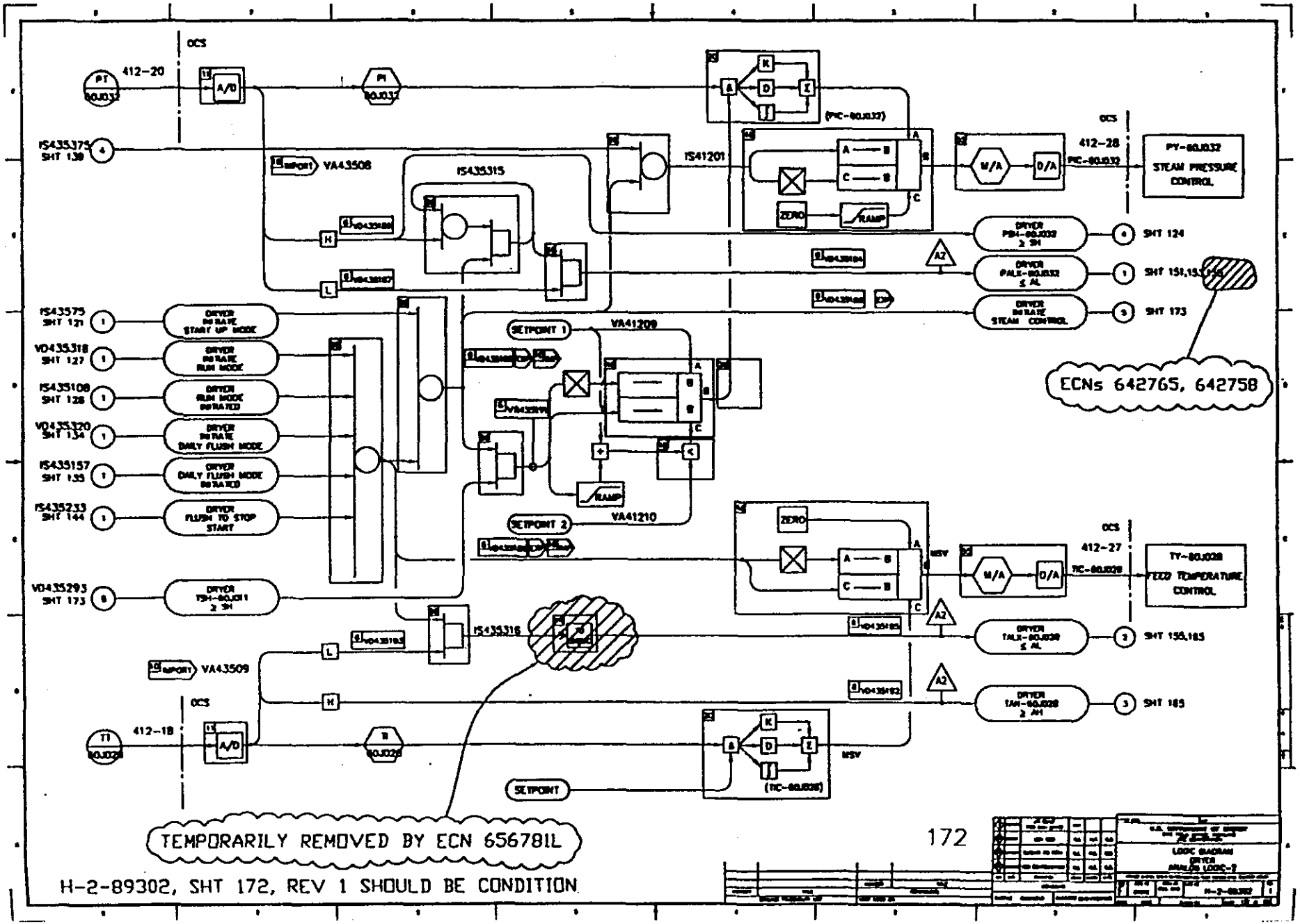


Excerpt from H-2-88989, sht 1, rev 16

ECN 656781L

/S Now

ENGINEERING CHANGE NOTICE CONTINUATION SHEET		ECN 656781L
	Page 5	Date 6-16-00



ENGINEERING CHANGE NOTICE

1. ECN ~~614443~~

Proj. ECN W-291H-~~0~~/15

FILE COPY 10

2. ECN Category (mark one)	3. Originator's Name, Organization, MSIN, and Telephone No.	4. Date
Supplemental [X] Direct Revision [] Change ECN [] Temporary [] Standby [] Supersedure [] Cancel/Void []	Joe Murphy, ICF KH, ER & SW, G3-17, 373-0867	9-19-94
	5. Project Title/No./Work Order No. W-291H 200 AREA BAT/AKART IMPLEMENTATION	6. Bldg./Sys./Fac. No. ETF TRUCK LOAD IN FACILITY
	7. Approval Designator N/A	
	8. Document Numbers Changed by this ECN (includes sheet no. and rev.) H-2-817969 SHT 1,2,3,4,5 ALD Rev 0 H-2-817975 SHT 1 Construction Spec. W-291H-C2	9. Related ECN No(s). W291H-~~0~~10 DSN/SC 9/27/94
		10. Related PO No. N/A/SC/3

11a. Modification Work	11b. Work Package No.	11c. Modification Work Complete	11d. Restored to Original Condition (Temp. or Standby ECN only)
[] Yes (fill out Blk. 11b) [] No (NA Blks. 11b, unknown 11c, 11d)	UNKNOWN	N/A Cog. Engineer Signature & Date	N/A Cog. Engineer Signature & Date

12. Description of Change SC/3

ITEM 1: DWG H-2-817969 SHT 1

a. ZONE C-4; Change alignment of line and add line as shown in sketch on page 5.

ITEM 2: DWG H-2-817969 SHT 2

a. Zone DE-3,4; Change alignment of line L-1 and add 4" line as shown in sketch on page 6.

b. Zone AB-7; Change and add line to profile as shown in sketch on page 7.

c. Zone D-7; Change notes as shown in sketch on page 8.

d. Zone B-6; Change detail as shown in sketch on page 8. Related ECN: W291H-~~0~~10

e. Zone B-1; Change note 3 to read as follows:

3. The 4" PVC pipe for line L-1 shall be IAW pipe code A or B of section 02650 of the spec.

SEE CONTINUATION SHEET PAGE 3.

13a. Justification (mark one)							
As-Found	[X]	Criteria Change	[]	Design Improvement	[X]	Environmental	[]
		Facilitate Const.	[X]	Const. Error/Omission	[]	Design Error/Omission	[X]

13b. Justification Details

See Continuation Sheet Page 4.

14. Distribution (include name, MSIN, and no. of copies)

ICF KH DISTRIBUTION		J. D. Fulcher	S2-32
Const Doc Cntl	S2-53	O. H. Jaka	R3-08
		E. A. McNarma	K6-90
WHC DISTRIBUTION		K. S. Pedersen (COG)	R3-35
Project Files	R1-28	J. H. Rasmussen	T6-20
M. C. Arntzen Jr.	L4-93	B. T. Tabayoyon	R3-35
J. K. Epperley	R1-29	R. L. Veilleux	T3-28

RELEASE STAMP

OFFICIAL RELEASE BY WHC (5)

DATE SEP 27 1994

Sta. 4

ENGINEERING CHANGE NOTICE

1. ECN (use no. from pg. 1) W291H-9715 DSH/RLE 9/27/94

15. Design Verification Required	16. Cost Impact				17. Schedule Impact (days)	
	ENGINEERING		CONSTRUCTION			
[] Yes	Additional	[] $ ϕ	Additional	[] $ 5K	Improvement	[] N/A
[] No	Savings	[] $	Savings	[] $	Delay	[]

18. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 12. Enter the affected document number in Block 19.

SDD/DD	[]	Seismic/Stress Analysis	[]	Tank Calibration Manual	[]
Functional Design Criteria	[]	Stress/Design Report	[]	Health Physics Procedure	[]
Operating Specification	[]	Interface Control Drawing	[]	Spares Multiple Unit Listing	[]
Criticality Specification	[]	Calibration Procedure	[]	Test Procedures/Specification	[]
Conceptual Design Report	[]	Installation Procedure	[]	Component Index	[]
Equipment Spec.	[]	Maintenance Procedure	[]	ASME Coded Item	[]
Const. Spec.	[]	Engineering Procedure	[]	Human Factor Consideration	[]
Procurement Spec.	[]	Operating Instruction	[]	Computer Software	[]
Vendor Information	[]	Operating Procedure	[]	Electric Circuit Schedule	[]
OM Manual	[]	Operational Safety Requirement	[]	ICRS Procedure	[]
FSAR/SAR	[]	IEFD Drawing	[]	Process Control Manual/Plan	[]
Safety Equipment List	[]	Cell Arrangement Drawing	[]	Process Flow Chart	[]
Radiation Work Permit	[]	Essential Material Specification	[]	Purchase Requisition	[]
Environmental Impact Statement	[]	Fac. Proc. Samp. Schedule	[]	Tickler File	[]
Environmental Report	[]	Inspection Plan	[]		[]
Environmental Permit	[]	Inventory Adjustment Request	[]		[]

19. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

Document Number/Revision	Document Number/Revision	Document Number Revision

20. Approvals

	Signature	Date
OPERATIONS AND ENGINEERING		
Cog. Eng.	[signature]	9/26/94
Cog. Mgr.	[signature]	9/26/94
QA		
Safety		
Environ.		
Other		

	Signature	Date
ARCHITECT-ENGINEER		
PE	[signature]	9-23-94
QA N/A DSM		9-22-94
Safety N/A DSM		9-22-94
Design [signature]		9-22-94
Environ. N/A DSM		9-22-94
Other		
DEPARTMENT OF ENERGY		
Signature or a Control Number that tracks the Approval Signature		
ADDITIONAL		

7. DESCRIPTION OF CHANGE CONT.

ITEM 3: DWG H-2-817969 SHT 3
a. Zone B-6,7; Remove gate and change notes as shown in sketch on page 9.

ITEM 4: DWG H-2-817969 SHT 4
a. Zone DEF-1,2,3,4; Remove TYP FENCE DETAIL and associated NOTES.

ITEM 5: DWG H-2-817969 SHT 5
a. Zone C-6; Add conduit to detail as shown in sketch on page 10.

ITEM 6: DWG H-2-817975 SHT 1
a. Zone C-1; Change note 6 to read as follows:

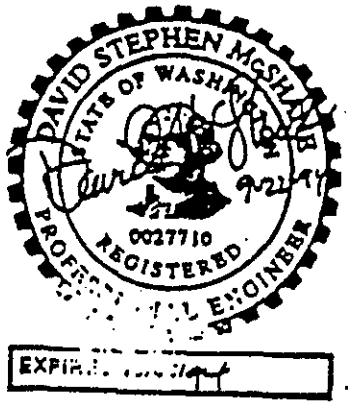
6. Pumps shall be supplied by ICF KH and installed by the Contractor IAW manufacturer's recommendations.

ITEM 7: CONSTRUCTION SPECIFICATION W-291H-C2, SECTION 02831
a. Delete Section 02831, Chain Link Fences and Gates.

ITEM 8: CONSTRUCTION SPECIFICATION W-291H-C2, SECTION 02831

a. Pipe Code A: Delete, FLEXIBLE COUPLINGS: COMPRESSION TYPE SLIP ON STEEL; DRESSER TYPE 38 OR 138.

b. Pipe Code C: Add, FLEXIBLE COUPLINGS: COMPRESSION TYPE SLIP ON STEEL; DRESSER TYPE 38 OR 138.



ENGINEERING CHANGE NOTICE CONTINUATION SHEET

ECN W-291H-Ø-15

Date 9/19/94

13b. JUSTIFICATION DETAILS

ITEM 1:
a. AF, Sanitary Water line must be moved to avoid leak detection risers installed by project C-018. 4" lined installed by project C-018 is added.

ITEM 2:
a. AF, Same as Item 1a.
b. AF, 4" line installed by C-018 crosses line L-2 and is added to profile.
c. DI, Redundancy in note is removed.
d. FC, Pipe material as called out on the drawing made fabrication of pipe expensive and time consuming.

ITEM 3:
a. AF, Fence is no longer necessary, therefore installation of a gate is not needed.

ITEM 4:
a. AF, Fence is no longer necessary, therefore the installation of a gate is not needed.

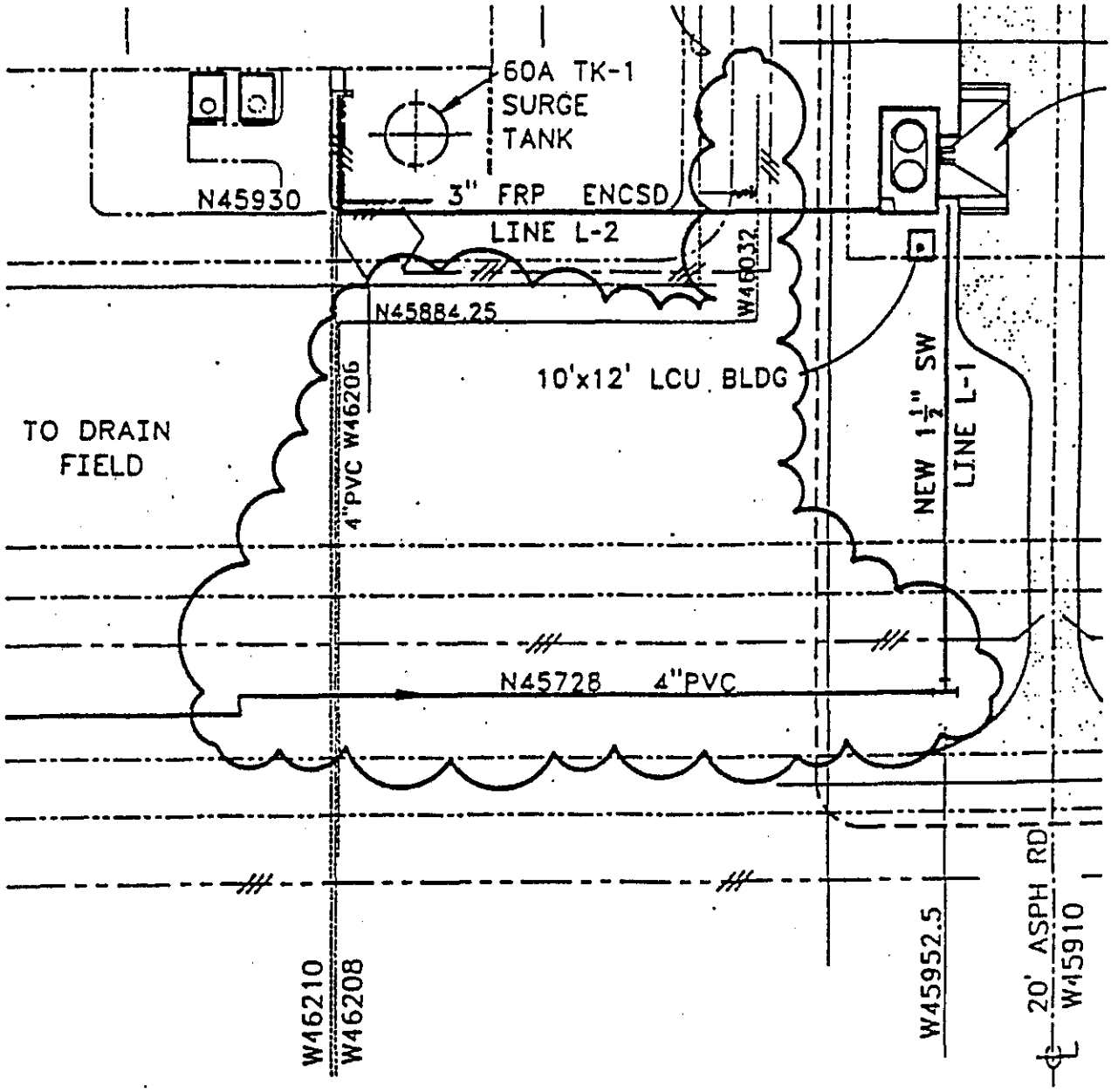
ITEM 5.
a. DE/O, Conduit penetration was left off of detail.

ITEM 6:
a. DI, Pump installation note is made more clear.

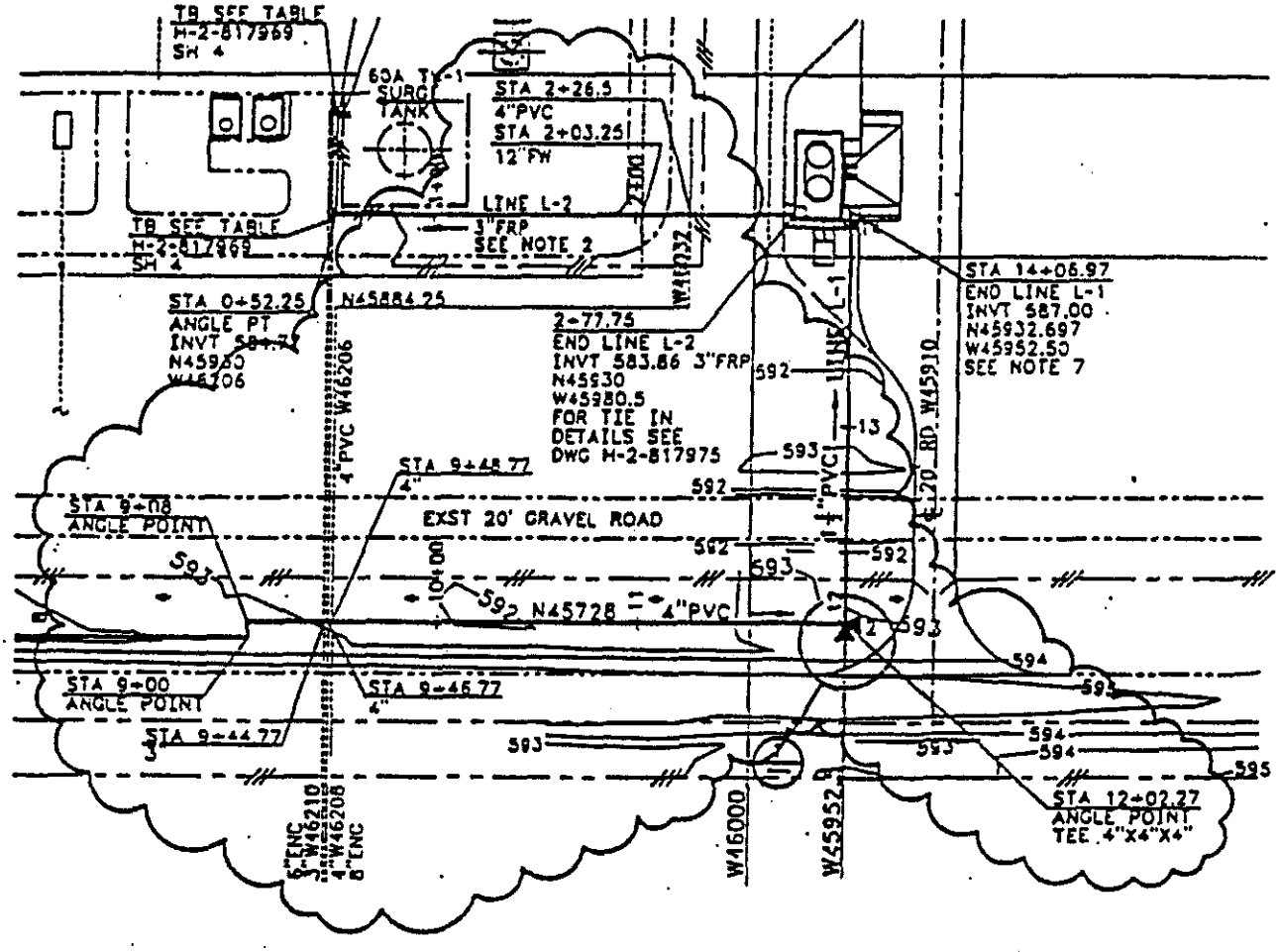
ITEM 7:
a. AF, Same as Item 3a and 4a.

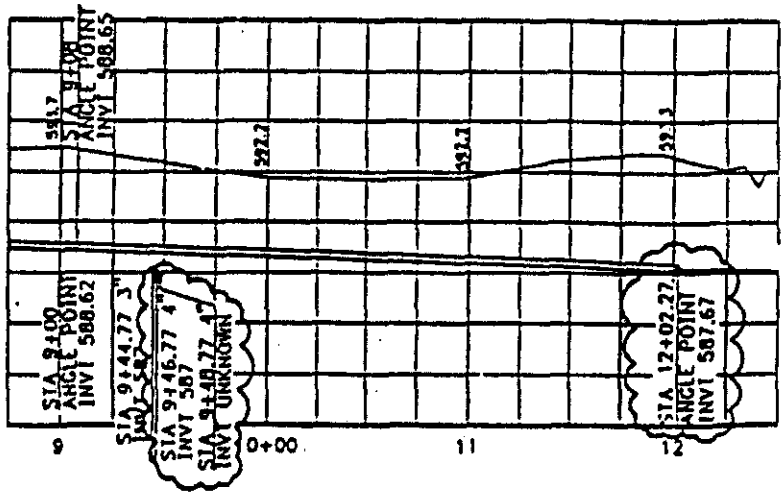
ITEM 8:
a. FC; Because of Item 2d, Compression Coupling is no longer needed in Pipe Code A and is needed in Pipe Code C.

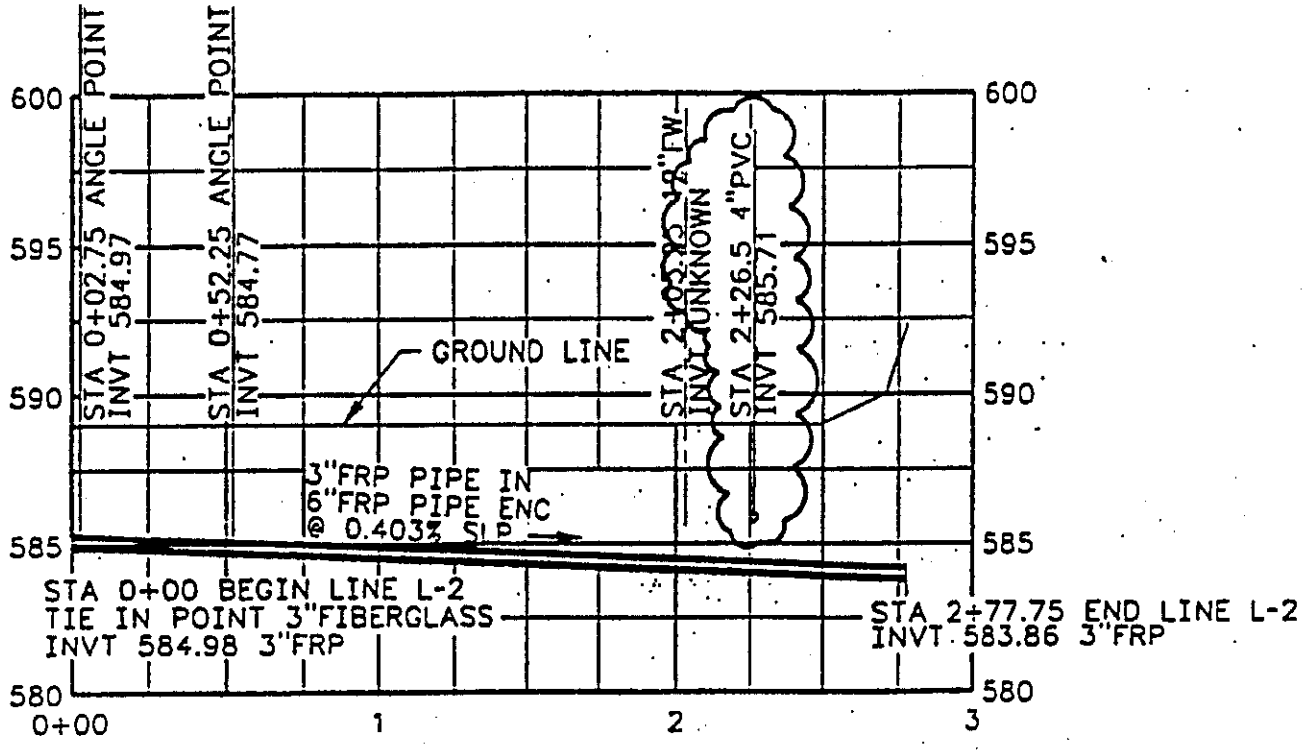
KAISER ENGINEERS HANFORD			ENGINEERING CHANGE NOTICE SKETCH			
Ref. Dwg.	Sh.	Rev.	Prepared By	Checked By	ECN No.	Pa
H-2-817969	1	0	RC CROSKREY		W-291H-15	



KAISER ENGINEERS HANFORD	ENGINEERING CHANGE NOTICE SKETCH					
Ref. Dwg.	Sh.	Rev.	Prepared By	Checked By	ECN No.	Page
H-2-817969	2	0	RC CROSKREY		W-291H-15	6







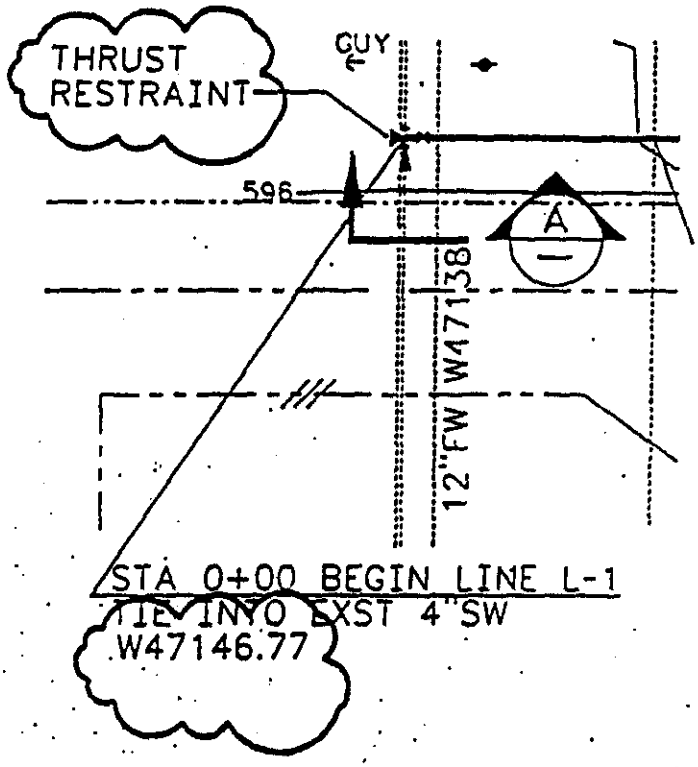
PROFILE LINE L-2

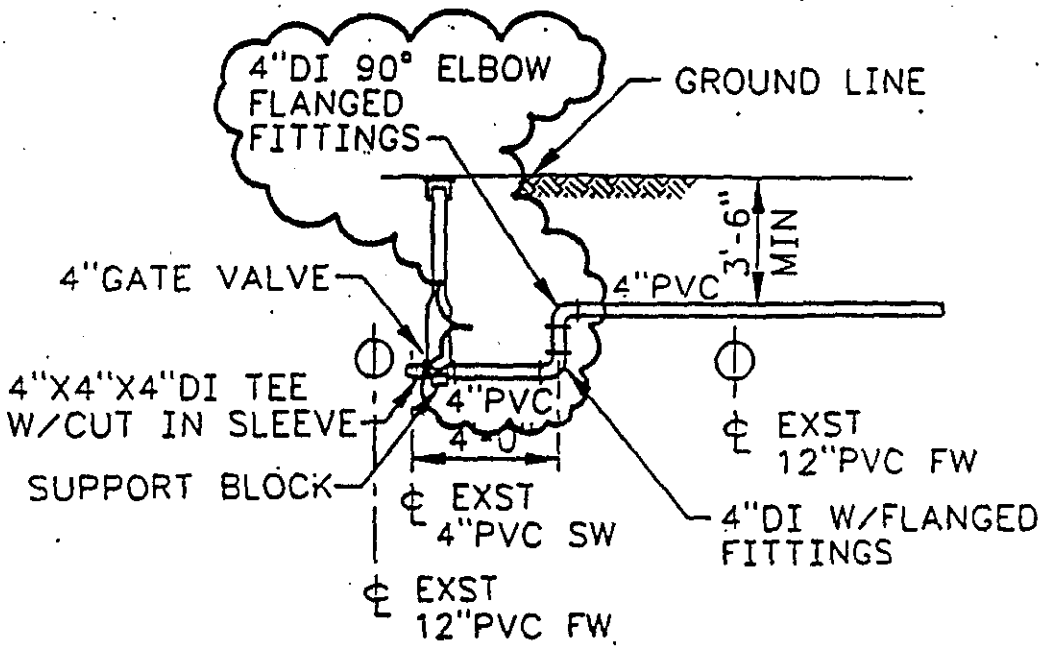
SCALE VERTICAL 1"=5'
HORIZONTAL 1"=50'

KAISER ENGINEERS
HANFORD

ENGINEERING CHANGE NOTICE SKETCH

Ref. Dwg.	Sh.	Rev.	Prepared By	Checked By	ECN No.	Page
H-2-817969	2	0	RC CROSKREY		W-291H-15	8





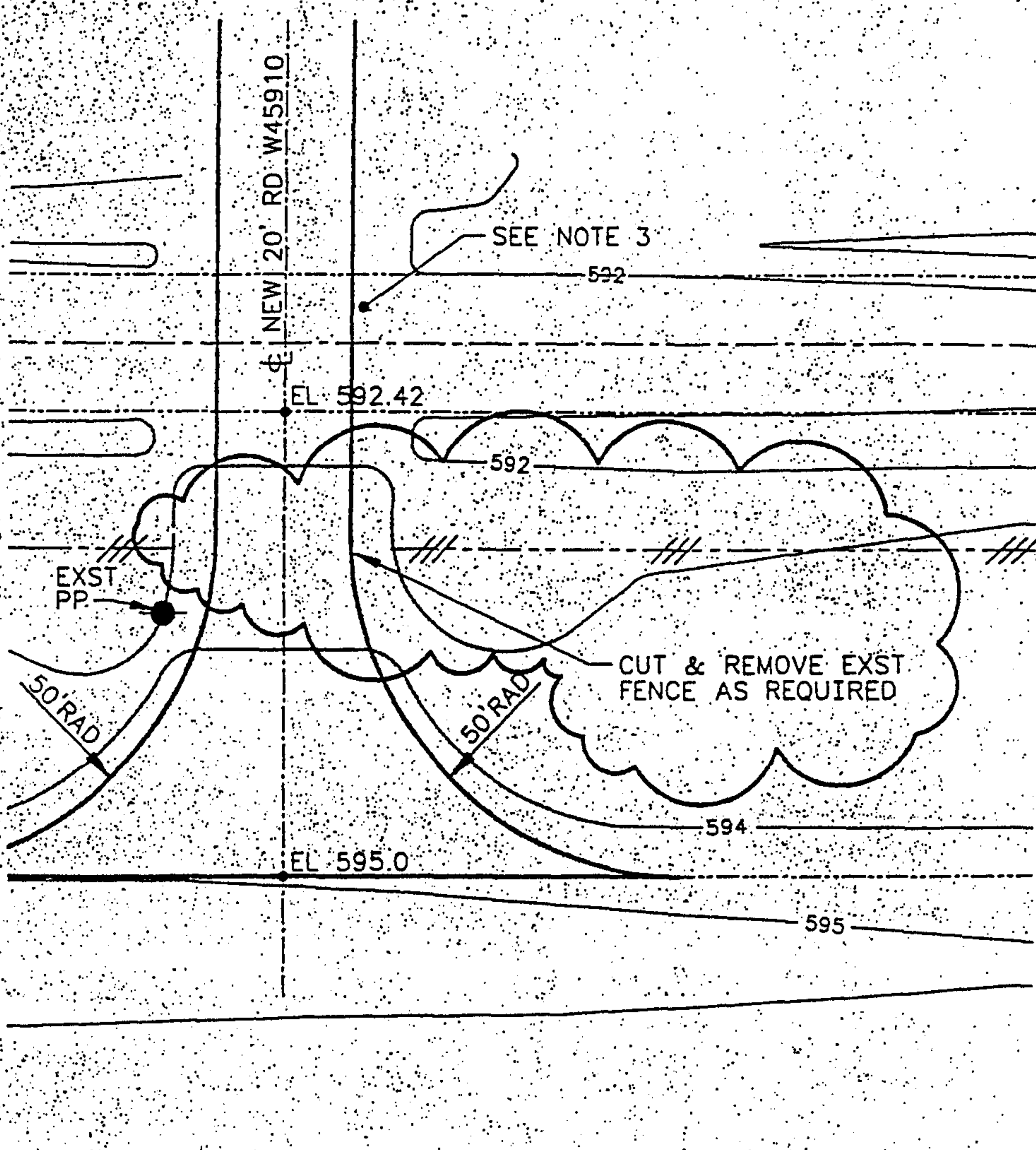
SECTION A

SCALE NONE

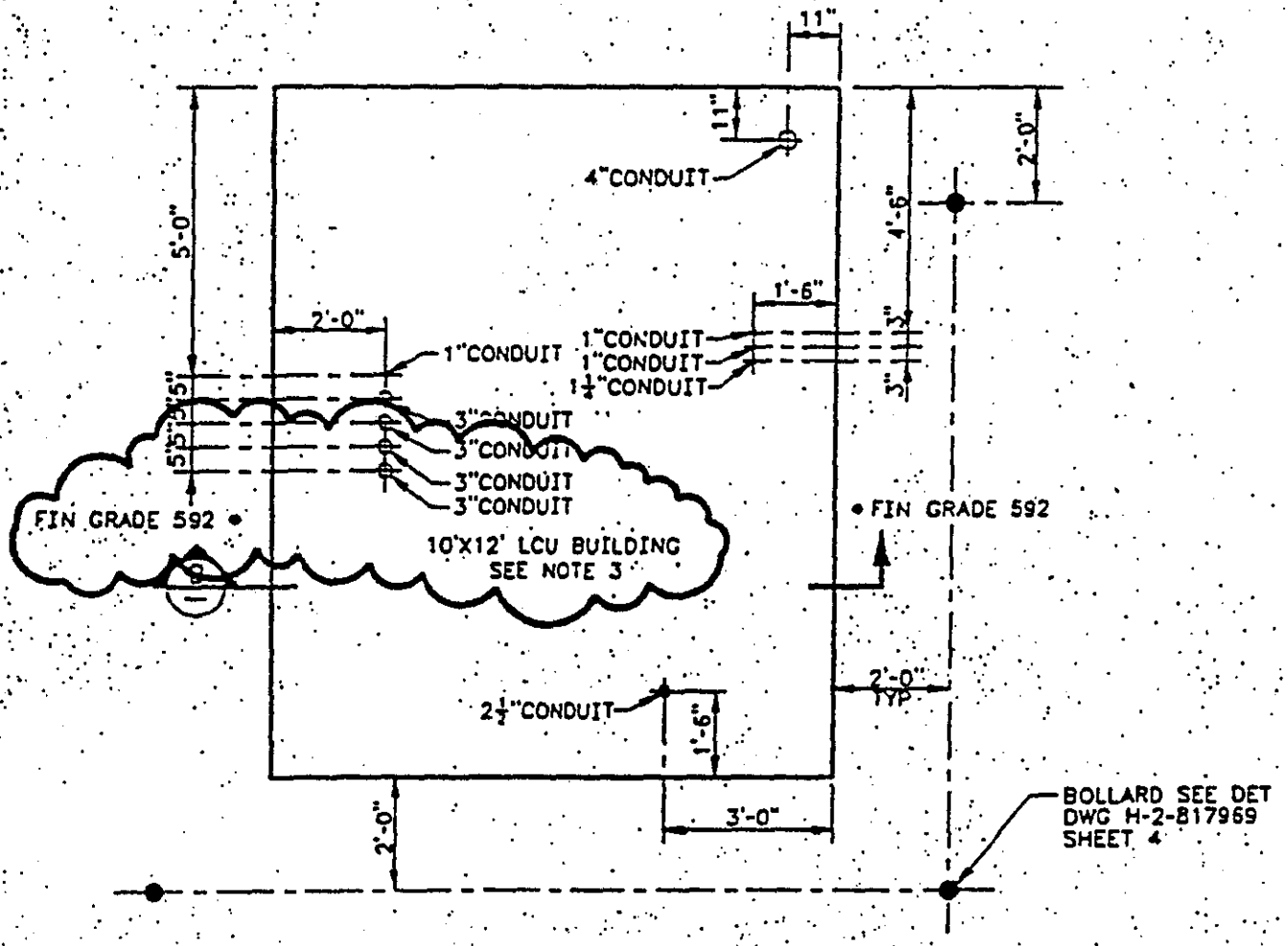
KAISER ENGINEERS HANFORD

ENGINEERING CHANGE NOTICE SKETCH

Ref. Dwg.	Sh.	Rev.	Prepared By	Checked By	ECN No.	Page
H-2-817969	3	0	RC CROSKREY	[signature]	W-291H-15	9/10



KAISER ENGINEERS HANFORD	ENGINEERING CHANGE NOTICE SKETCH					
Ref. Dwg.	Sh.	Rev.	Prepared By	Checked By	ECN No.	Page
H-2-817969	5	0	RC CROSKREY		W-291H-15	10



DETAIL (2)
SCALE ½"=1'-0" H-2-817969 SH 3

CPF 18

ENGINEERING CHANGE NOTICE

ESSENTIAL

Page 1 of 24

1. ECN 641703

Proj. ECN

2. ECN Category (mark one)	3. Originator's Name, Organization, MSIN, and Telephone No.	4. USQ Required?	5. Date
Supplemental [X] Direct Revision [] Change ECN [] Temporary [] Standby [] Supersedure [] Cancel/Void []	RN Wagner/32200/S6-71/376-4460	[] Yes [X] No	May 13, 1997
	6. Project Title/No./Work Order No. Misc. Mods and As-Builts for ETF Load-In Station	7. Bldg./Sys./Fac. No. 2025E/59A,60M/ 200 Area ETF	8. Approval Designator NA
	9. Document Numbers Changed by this ECN (includes sheet no. and rev.) See Block 13A	10. Related ECN No(s). N/A	11. Related PO No. NA

12a. Modification Work	12b. Work Package No.	12c. Modification Work Complete	12d. Restored to Original Condition (Temp. or Standby ECN only)
[X] Yes (fill out Blk. 12b) [] No (NA Blks. 12b, 12c, 12d)	EL-96-00208. EL-97-00343	Design Authority/Cog. Engineer Signature & Date	NA Design Authority/Cog. Engineer Signature & Date

13a. Description of Change 13b. Design Baseline Document? [X] Yes [] No

This ECN implements the following changes:

- Remove flow orifice in System 60M transfer line from Load-In Station.
- As-build sample valve and tanker vent valving.
- Add drain lines and valves to Load-In Station pump cases.
- Add bell-reducer funnels and valving to suction of Load-In Station pumps.
- Replace "Facility" with "Station" in all Load-In drawing titles.
- Identify status of Load-In Station drawings to Essential or Support.

Piping, fittings and jointing methods to meet the requirements of Hanford Site piping specification Class M-9. Install, inspect and test the new piping installation in accordance with ASME B31.3 and Addenda for Category D fluid service.

(Block 13a continued on Page 3)

14a. Justification (mark one)

Criteria Change	[]	Design Improvement	[X]	Environmental	[]	Facility Deactivation	[]
As-Found	[X]	Facilitate Const	[]	Const. Error/Omission	[]	Design Error/Omission	[]

14b. Justification Details

- Remove flow orifice in transfer line from Load-In Station to increase flow rate.
- As-build sample valve and tanker vent valving for configuration control.
- Add drain lines and valves to Load-In Station pump cases for improved contamination control.
- Add bell-reducer funnels and valving to allow priming of Load-In Station pumps.
- Replace "Facility" with "Station" in drawing titles to reflect the status of the Load-In Station as part of the 200 Area ETF, rather than a stand-alone facility.
- Identify status of Load-In Station drawings to Essential or Support, as appropriate.

15. Distribution (include name, MSIN, and no. of copies)

N. J. Sullivan	S6-72	1	R. J. Nicklas	S6-72	1
J. E. Geary	S6-71	2	A. K. Yoakum	S6-71	1
R. N. Wagner*	S6-71	2	S. P. Biglin*	S6-74	1
C. M. Towne	S6-74	1	E. A. McNamar*	S6-74	1
J. L. Vigue	S6-74	1	B. S. Darling	S6-72	1
J. F. Berger	S6-74	1	D. P. Nelsen	S6-71	1
T. W. Dallas	S6-71	1	Stations 3/4/5/15/16/30		

(* Advance Copies)

RELEASE STAMP
DATE: MAY 27 1997
STA: 30
HANFORD RELEASE
ID: 25

A-7900-013-2 (05/96) GEF095

ENGINEERING CHANGE NOTICE

1. ECN (use no. from pg. 1): 641703

16. Design Verification Required	17. Cost Impact				18. Schedule Impact (days)	
	ENGINEERING	NA	CONSTRUCTION		NA	
[X] Yes	Additional	[] $	Additional	[] $	Improvement	[]
[] No	Savings	[] $	Savings	[] $	Delay	[]

19. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 13. Enter the affected document number in Block 20.

SDD/DD	[]	Seismic/Stress Analysis	[]	Tank Calibration Manual	[]
Functional Design Criteria	[]	Stress/Design Report	[]	Health Physics Procedure	[]
Operating Specification	[]	Interface Control Drawing	[]	Spares Multiple Unit Listing	[]
Criticality Specification	[]	Calibration Procedure	[]	Test Procedures/Specification	[]
Conceptual Design Report	[]	Installation Procedure	[]	Component Index	[X]
Equipment Spec.	[]	Maintenance Procedure	[]	ASME Coded Item	[]
Const. Spec.	[]	Engineering Procedure	[]	Human Factor Consideration	[]
Procurement Spec.	[]	Operating Instruction	[]	Computer Software	[]
Vendor Information	[X]	Operating Procedure	[]	Electric Circuit Schedule	[]
OM Manual	[]	Operational Safety Requirement	[]	ICRS Procedure	[]
FSAR/SAR	[]	IEFD Drawing	[]	Process Control Manual/Plan	[]
Safety Equipment List	[]	Cell Arrangement Drawing	[]	Process Flow Chart	[]
Radiation Work Permit	[]	Essential Material Specification	[]	Purchase Requisition	[]
Environmental Impact Statement	[]	Fac. Proc. Samp. Schedule	[]	Tickler File	[]
Environmental Report	[]	Inspection Plan	[]		[]
Environmental Permit	[]	Inventory Adjustment Request	[]		[]

20. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

Document Number/Revision	Document Number/Revision	Document Number Revision
JCS Database (Component Index)		

21. Approvals

Signature	Date	Signature	Date
Design Authority - R. N. Wagner	5/23/97	Design Agent	
Cog. Eng. - R. N. Wagner	5/22/97	PE	
Cog. Mgr. - R. J. Nicklas FOR	5-23-97	QA	
QA		Safety	
Safety		Design	
Environ.		Environ.	
Other		Other	

DEPARTMENT OF ENERGY

Signature or a Control Number that tracks the Approval Signature

ADDITIONAL

ENGINEERING CHANGE NOTICE CONTINUATION SHEET	ECN 641703
Page 3 of 24	Date 5/13/97

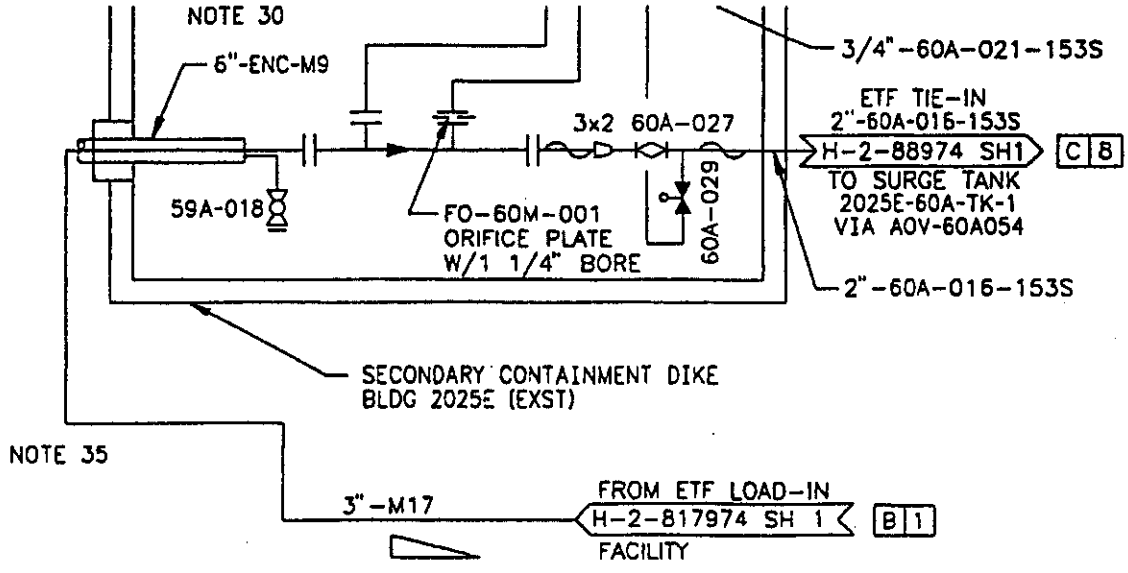
Documents changed by this ECN (also see attached drawing changes):

H-2-88766, Sheet 4, Rev. 2
H-2-88779, Sheet 4, Rev. 0
H-9-203, Sheet 1, Rev. 0
H-9-203, Sheet 4, Rev. 0
H-2-817968, Sheet 1, Rev. 1*
H-2-817969, Sheet 1, Rev. 1*
H-2-817969, Sheet 2, Rev. 1*
H-2-817969, Sheet 3, Rev. 1*
H-2-817969, Sheet 4, Rev. 1*
H-2-817969, Sheet 5, Rev. 1*
H-2-817970, Sheet 1, Rev. 1*
H-2-817970, Sheet 2, Rev. 1*
H-2-817971, Sheet 1, Rev. 1*
H-2-817971, Sheet 2, Rev. 1*
H-2-817972, Sheet 1, Rev. 1*
H-2-817973, Sheet 1, Rev. 1*
H-2-817974, Sheet 1, Rev. 2*
H-2-817975, Sheet 1, Rev. 1*
H-2-817976, Sheet 1, Rev. 1*
H-2-817977, Sheet 1, Rev. 1*
H-2-817978, Sheet 1, Rev. 1*
H-2-817980, Sheet 1, Rev. 1*
H-2-817981, Sheet 1, Rev. 1*
H-2-817981, Sheet 2, Rev. 1*
H-2-817981, Sheet 3, Rev. 1*
H-2-817981, Sheet 4, Rev. 1*
H-2-817981, Sheet 5, Rev. 1*
H-2-817983, Sheet 1, Rev. 0*
H-2-817983, Sheet 2, Rev. 1*
H-2-817983, Sheet 3, Rev. 0*
H-2-817983, Sheet 4, Rev. 1*
H-2-817983, Sheet 5, Rev. 0*
H-2-817983, Sheet 6, Rev. 1*
H-2-817983, Sheet 7, Rev. 0*
H-2-817983, Sheet 8, Rev. 0*
H-2-817985, Sheet 1, Rev. 1*
H-2-817985, Sheet 2, Rev. 1*
H-2-817987, Sheet 1, Rev. 1*
H-2-817987, Sheet 3, Rev. 1*
H-2-817987, Sheet 4, Rev. 1*
H-2-817988, Sheet 1, Rev. 1*
H-2-817988, Sheet 2, Rev. 1*
H-2-817988, Sheet 3, Rev. 1*
H-2-817989, Sheet 1, Rev. 1*
H-2-817990, Sheet 1, Rev. 1*
H-2-817991, Sheet 2, Rev. 1*

(* Title and/or Essential/Support status is changed for these drawings per this ECN.)

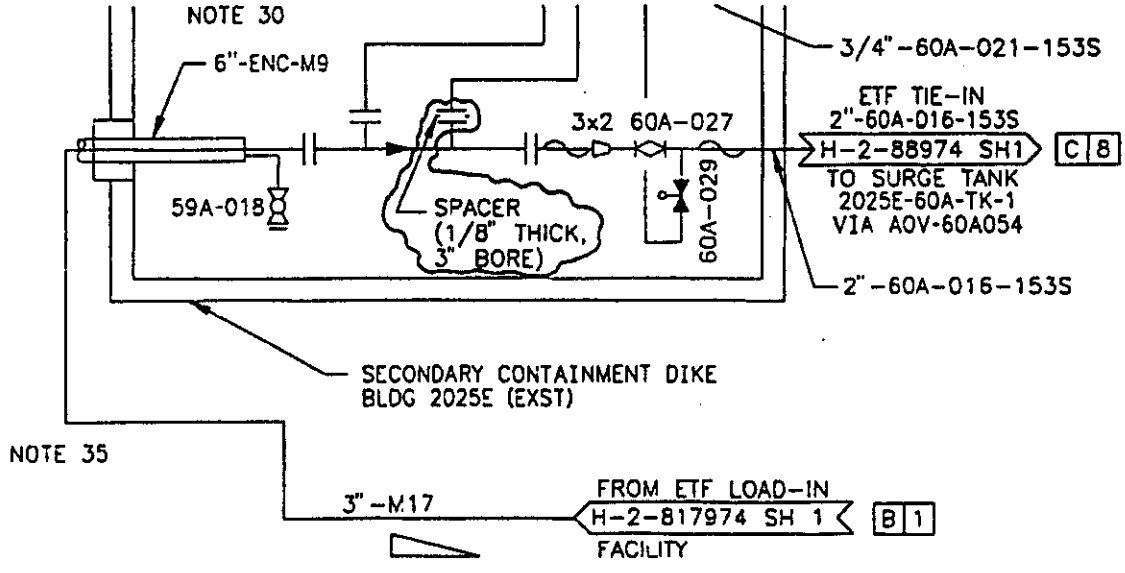
H-2-88766, Sheet 4, Rev. 2, Zone D-2

IS:



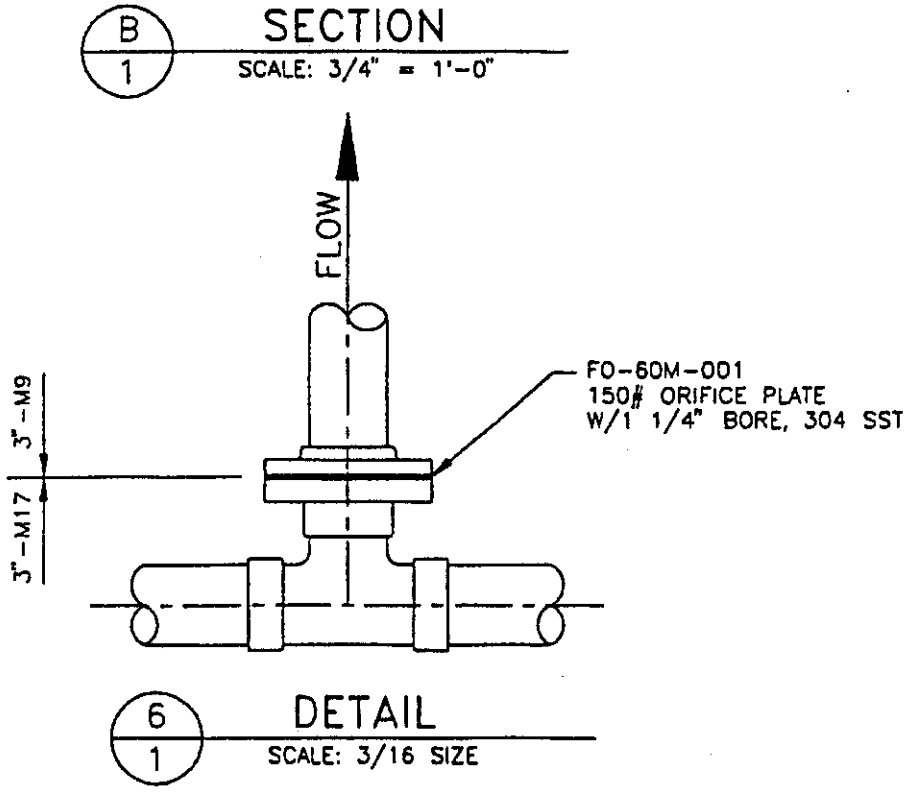
H-2-88766, Sheet 4, Rev. 2, Zone D-2

CHANGE TO:



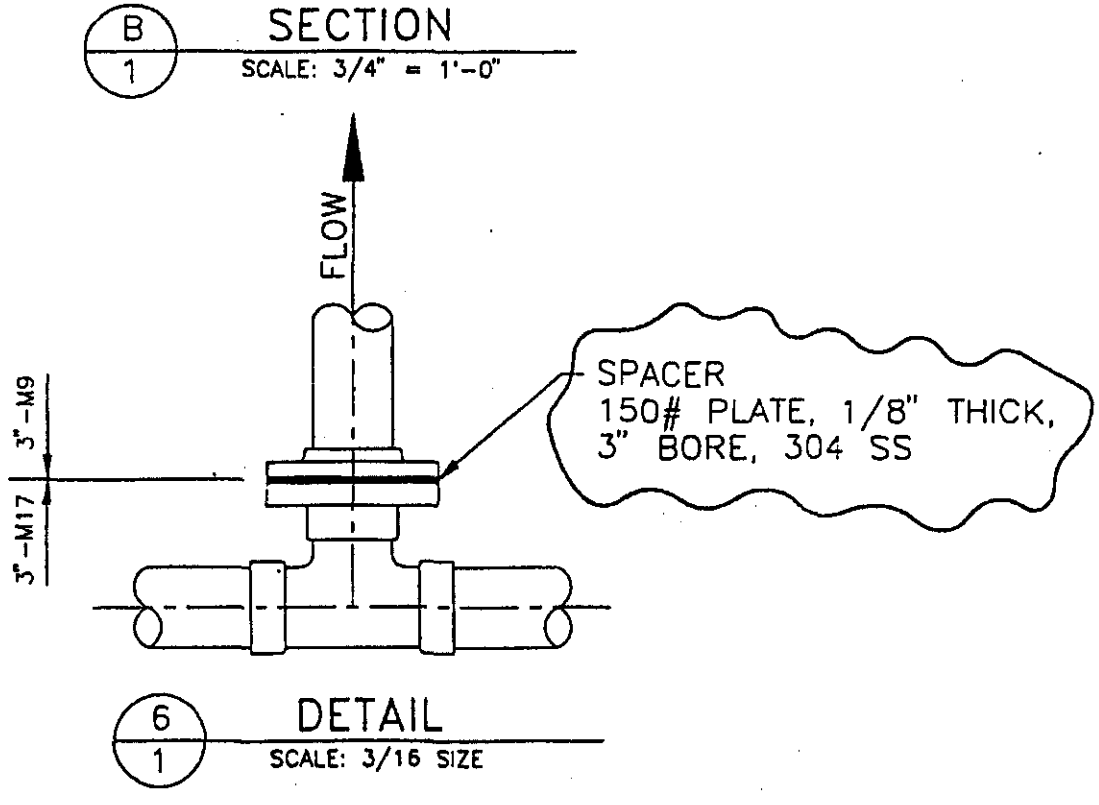
H-2-88779, Sheet 4, Rev. 0, Zone B-2

IS:



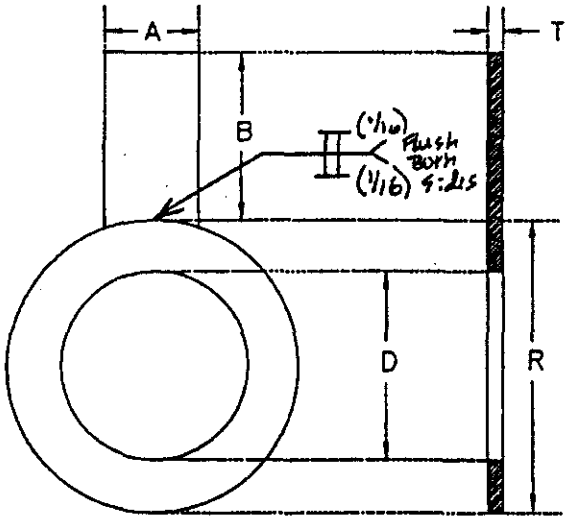
H-2-88779, Sheet 4, Rev. 0, Zone B-2

CHANGE TO:



Sketch for 3" spacer shown in above changes to H-2-88779 and H-2-88766

3" FLANGE SPACER FOR ECN 641703



T = 1/8" PLATE THICKNESS

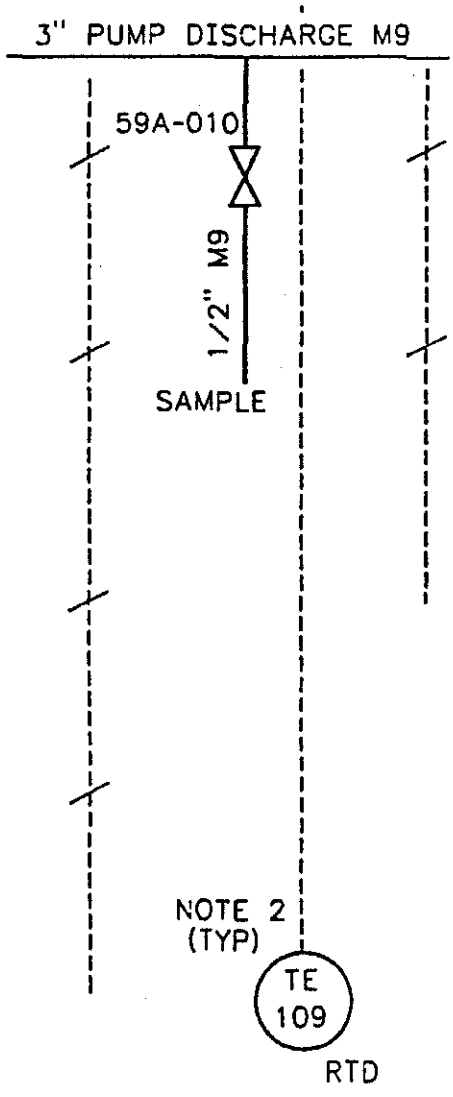
A = 2" (APPROX)
B = 3" (APPROX)

D = 3.00" +/- .05"
R = 5.25" +/- .05"

MATERIAL = 304SS
FLANGE CLASS = 150 LB

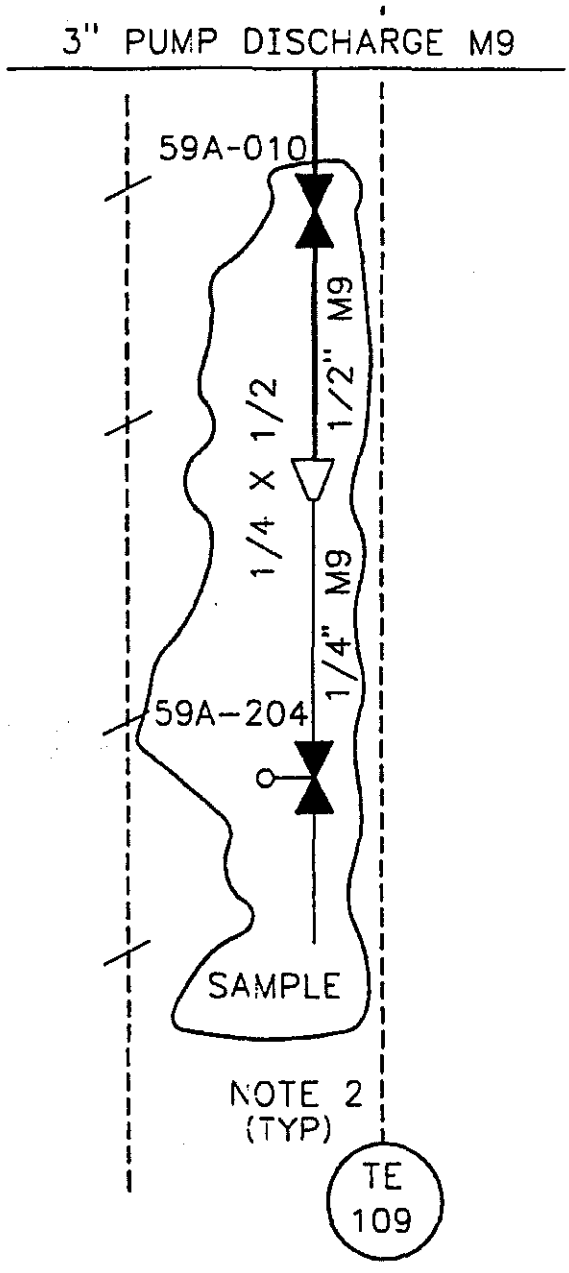
H-2-817974, Sheet 1, Rev. 2, Zone C-5

IS:



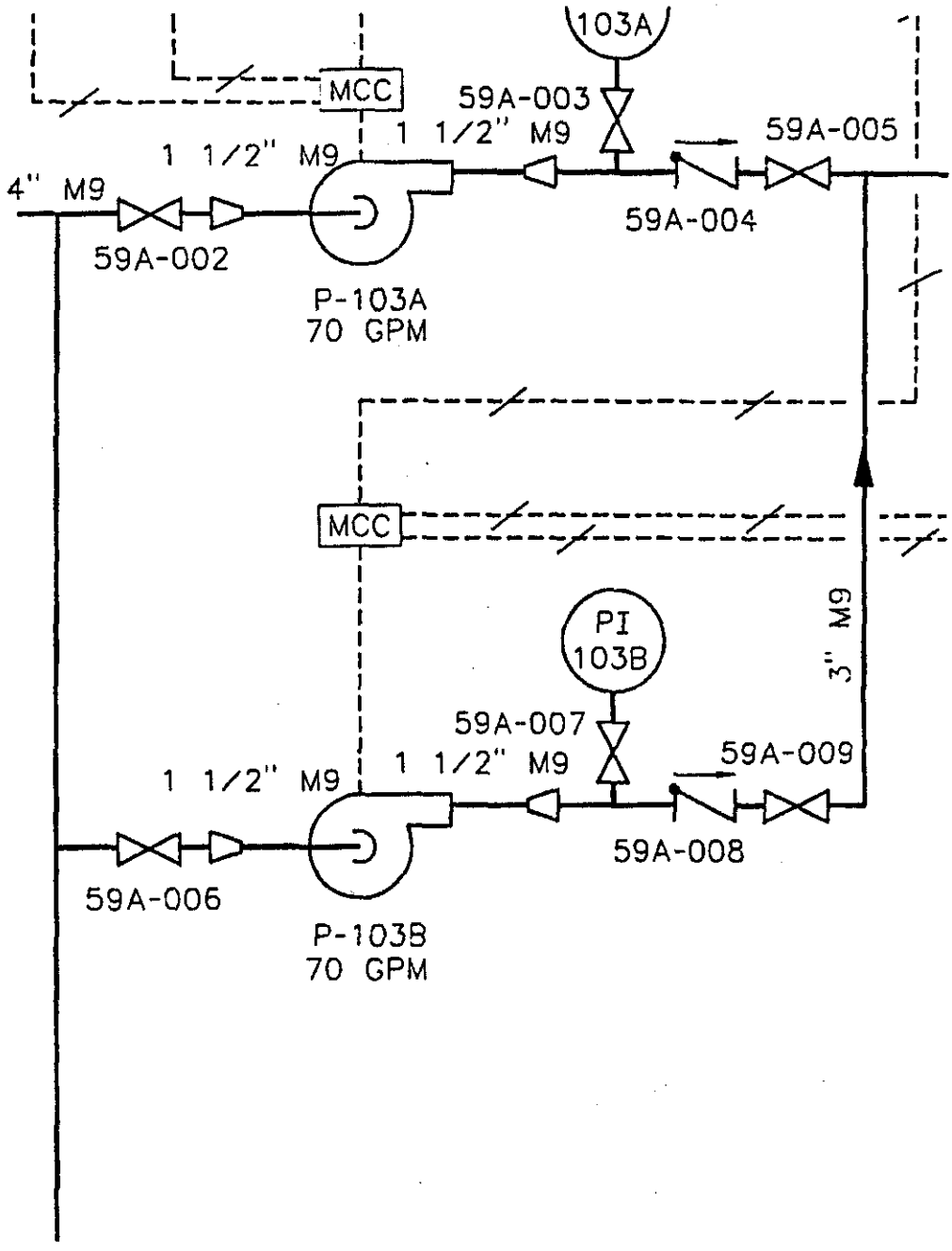
H-2-817974, Sheet 1, Rev. 2, Zone C-5

CHANGE TO:



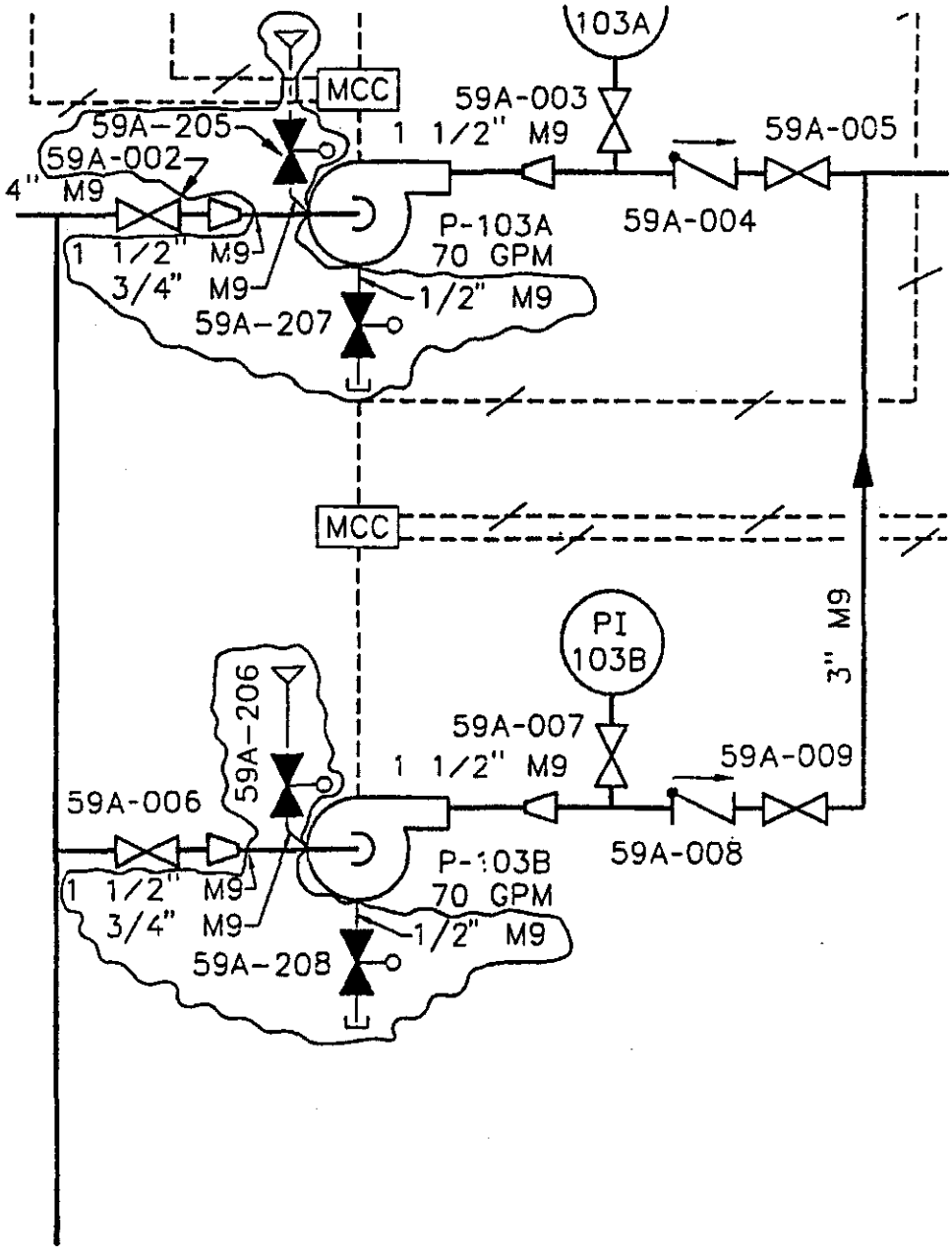
H-2-817974, Sheet 1, Rev. 2, Zone C-7 to D-7

IS:



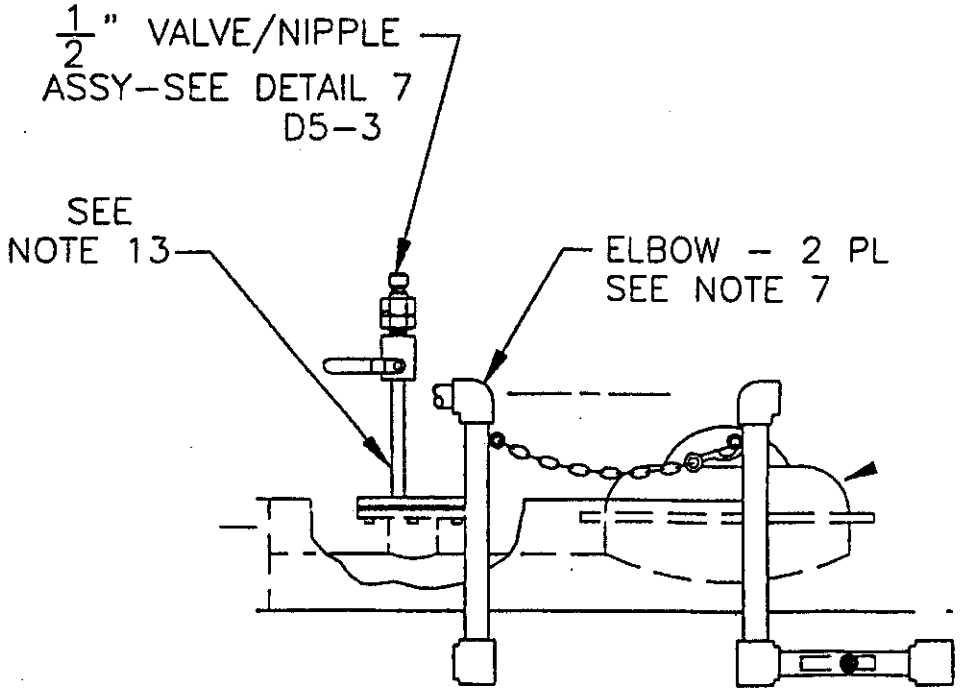
H-2-817974, Sheet 1, Rev. 2, Zone C-7 to D-7

CHANGE TO:



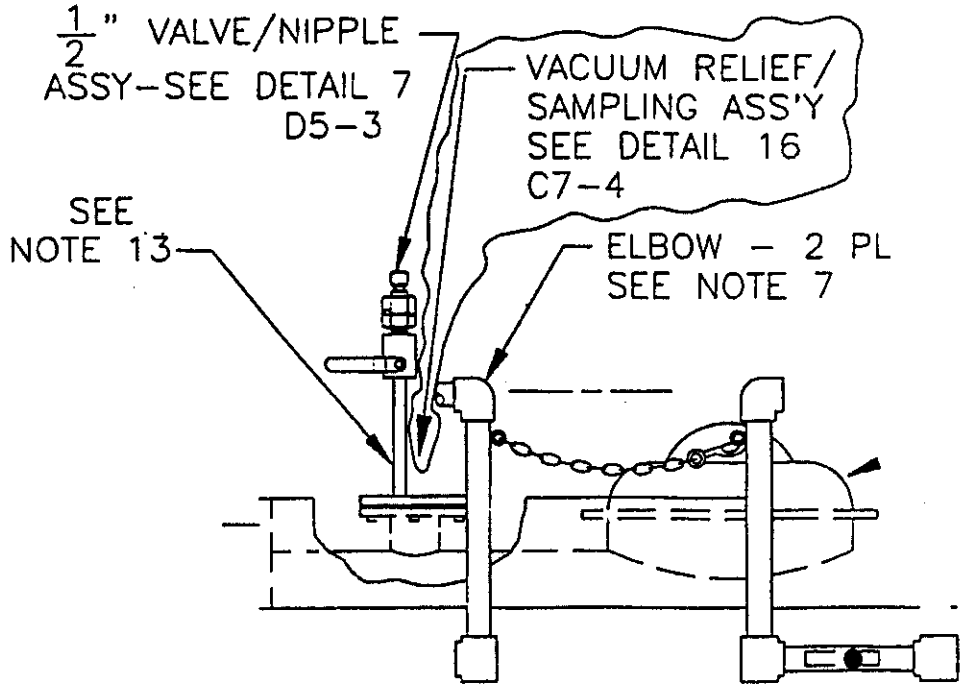
H-9-203, Sheet 1, Rev. 0, Zone E-6

IS:



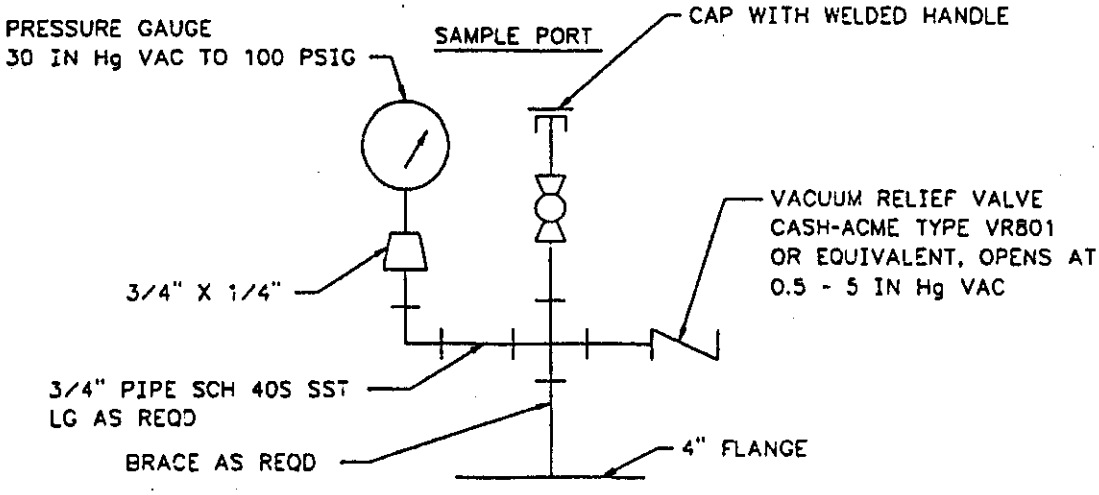
H-9-203, Sheet 1, Rev. 0, Zone E-6

CHANGE TO:



H-9-203, Sheet 4, Rev. 0, Zone D-7.

IS:

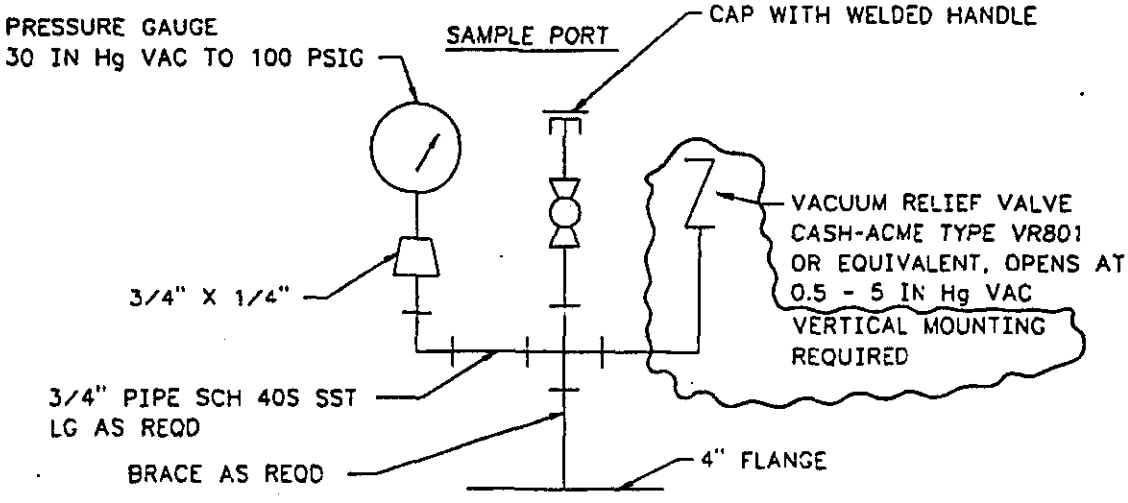


DETAIL 16 C6-2

SCALE: NONE

H-9-203, Sheet 4, Rev. 0, Zone D-7

CHANGE TO:



DETAIL 16 C6-2, E6-1

SCALE: NONE

H-2-817968, Sheet 1, Rev. 1, Title

IS: ETF TRUCK LOAD-IN FACILITY LOCATION PLAN & DWG LIST

CHANGE TO: ETF TRUCK LOAD-IN STATION LOCATION PLAN & DWG LIST

Drawing Status: ESSENTIAL

H-2-817969, Sheet 1, Rev. 1, Title

IS: CIVIL ETF TRUCK LOAD-IN FACILITY SITE PLAN

CHANGE TO: CIVIL ETF TRUCK LOAD-IN STATION SITE PLAN

Drawing Status: SUPPORT

H-2-817969, Sheet 2, Rev. 1, Title

IS: CIVIL ETF TRUCK LOAD-IN FACILITY PLAN AND PROFILES

CHANGE TO: CIVIL ETF TRUCK LOAD-IN STATION PLAN AND PROFILES

Drawing Status: SUPPORT

H-2-817969, Sheet 3, Rev. 1, Title

IS: CIVIL ETF TRUCK LOAD-IN FACILITY ENLARGED PLAN

CHANGE TO: CIVIL ETF TRUCK LOAD-IN STATION ENLARGED PLAN

Drawing Status: SUPPORT

H-2-817969, Sheet 4, Rev. 1, Title

IS: CIVIL ETF TRUCK LOAD-IN FACILITY MISCELLANEOUS DETAILS

CHANGE TO: CIVIL ETF TRUCK LOAD-IN STATION MISCELLANEOUS DETAILS

Drawing Status: SUPPORT

H-2-817969, Sheet 5, Rev. 1, Title

IS: CIVIL ETF TRUCK LOAD-IN FACILITY MISCELLANEOUS DETAILS

CHANGE TO: CIVIL ETF TRUCK LOAD-IN STATION MISCELLANEOUS DETAILS

Drawing Status: SUPPORT

H-2-817970, Sheet 1, Rev. 1, Title

IS: STRUCTURAL ETF TRUCK LOAD-IN FACILITY PLAN AND SECTIONS

CHANGE TO: STRUCTURAL ETF TRUCK LOAD-IN STATION PLAN AND SECTIONS

Drawing Status: SUPPORT

H-2-817970, Sheet 2, Rev. 1, Title

IS: STRUCTURAL ETF TRUCK LOAD-IN FACILITY SECTIONS AND DETAILS

CHANGE TO: STRUCTURAL ETF TRUCK LOAD-IN STATION SECTIONS AND DETAILS

Drawing Status: SUPPORT

H-2-817971, Sheet 1, Rev. 1, Title

IS: STRUCTURAL ETF TRUCK LOAD-IN FACILITY STEEL PLAN & SECTIONS

CHANGE TO: STRUCTURAL ETF TRUCK LOAD-IN STATION STEEL PLAN & SECTIONS

Drawing Status: SUPPORT

H-2-817971, Sheet 2, Rev. 1, Title

IS: STRUCTURAL ETF TRUCK LOAD-IN FACILITY STEEL DETAILS

CHANGE TO: STRUCTURAL ETF TRUCK LOAD-IN STATION STEEL DETAILS

Drawing Status: SUPPORT

H-2-817972, Sheet 1, Rev. 1, Title

IS: STRUCTURAL ETF TRUCK LOAD-IN FACILITY SECTIONS AND DETAILS

CHANGE TO: STRUCTURAL ETF TRUCK LOAD-IN STATION SECTIONS AND DETAILS

Drawing Status: SUPPORT

H-2-817973, Sheet 1, Rev. 1, Title

IS: STRUCTURAL ETF TRUCK LOAD-IN FACILITY MISC SECTIONS AND DETAILS

CHANGE TO: STRUCTURAL ETF TRUCK LOAD-IN STATION MISC SECTIONS AND DETAILS

Drawing Status: SUPPORT

H-2-817974, Sheet 1, Rev. 2, Title

IS: P & ID ETF TRUCK LOAD-IN FACILITY

CHANGE TO: P & ID ETF TRUCK LOAD-IN STATION

Drawing Status: ESSENTIAL

H-2-817975, Sheet 1, Rev. 1, Title

IS: PIPING ETF TRUCK LOAD-IN FACILITY PLAN

CHANGE TO: PIPING ETF TRUCK LOAD-IN STATION PLAN

Drawing Status: ESSENTIAL

H-2-817976, Sheet 1, Rev. 1, Title

IS: PIPING ETF TRUCK LOAD-IN FACILITY SECTIONS AND DETAILS

CHANGE TO: PIPING ETF TRUCK LOAD-IN STATION SECTIONS AND DETAILS

Drawing Status: SUPPORT

H-2-817977, Sheet 1, Rev. 1, Title

IS: PIPING ETF TRUCK LOAD-IN FACILITY DETAILS

CHANGE TO: PIPING ETF TRUCK LOAD-IN STATION DETAILS

Drawing Status: SUPPORT

H-2-817978, Sheet 1, Rev. 1, Title

IS: PIPING ETF TRUCK LOAD-IN FACILITY PIPE SUPPORTS

CHANGE TO: PIPING ETF TRUCK LOAD-IN STATION PIPE SUPPORTS

Drawing Status: SUPPORT

H-2-817980, Sheet 1, Rev. 1, Title

IS: INSTRUMENTATION ETF TRUCK LOAD-IN FACILITY LEGEND & SYMBOLS

CHANGE TO: INSTRUMENTATION ETF TRUCK LOAD-IN STATION LEGEND & SYMBOLS

Drawing Status: SUPPORT

H-2-817981, Sheet 1, Rev. 1, Title

IS: INSTRUMENTATION ETF TRUCK LOAD-IN FACILITY LOOP DIAGRAM

CHANGE TO: INSTRUMENTATION ETF TRUCK LOAD-IN STATION LOOP DIAGRAM

Drawing Status: SUPPORT

H-2-817981, Sheet 2, Rev. 1, Title

IS: INSTRUMENTATION ETF TRUCK LOAD-IN FACILITY LOOP DIAGRAM

CHANGE TO: INSTRUMENTATION ETF TRUCK LOAD-IN STATION LOOP DIAGRAM

Drawing Status: SUPPORT

H-2-817981, Sheet 3, Rev. 1, Title

IS: INSTRUMENTATION ETF TRUCK LOAD-IN FACILITY LOOP DIAGRAM

CHANGE TO: INSTRUMENTATION ETF TRUCK LOAD-IN STATION LOOP DIAGRAM

Drawing Status: SUPPORT

H-2-817981, Sheet 4, Rev. 1, Title

IS: INSTRUMENTATION ETF TRUCK LOAD-IN FACILITY LOOP DIAGRAM

CHANGE TO: INSTRUMENTATION ETF TRUCK LOAD-IN STATION LOOP DIAGRAM

Drawing Status: SUPPORT

H-2-817981, Sheet 5, Rev. 1, Title

IS: INSTRUMENTATION ETF TRUCK LOAD-IN FACILITY LOOP DIAGRAM

CHANGE TO: INSTRUMENTATION ETF TRUCK LOAD-IN STATION LOOP DIAGRAM

Drawing Status: SUPPORT

H-2-817983, Sheet 1, Rev. 0, Title

CHANGE TO: Drawing Status: SUPPORT

H-2-817983, Sheet 2, Rev. 1, Title

CHANGE TO: Drawing Status: SUPPORT

H-2-817983, Sheet 3, Rev. 0, Title

CHANGE TO: Drawing Status: SUPPORT

H-2-817983, Sheet 4, Rev. 1, Title

CHANGE TO: Drawing Status: SUPPORT

H-2-817983, Sheet 5, Rev. 0, Title

CHANGE TO: Drawing Status: SUPPORT

H-2-817983, Sheet 6, Rev. 1, Title

CHANGE TO: Drawing Status: SUPPORT

H-2-817983, Sheet 7, Rev. 0, Title

CHANGE TO: Drawing Status: SUPPORT

H-2-817983, Sheet 8, Rev. 0, Title

CHANGE TO: Drawing Status: SUPPORT

H-2-817985, Sheet 1, Rev. 1, Title

IS: INSTRUMENTATION ETF TRUCK LOAD-IN FACILITY SECTIONS AND DETAILS

CHANGE TO: INSTRUMENTATION ETF TRUCK LOAD-IN STATION SECTIONS AND DETAILS

Drawing Status: SUPPORT

H-2-817985, Sheet 2, Rev. 1, Title

IS: INSTRUMENTATION ETF TRUCK LOAD-IN FACILITY SECTIONS AND DETAILS

CHANGE TO: INSTRUMENTATION ETF TRUCK LOAD-IN STATION SECTIONS AND DETAILS

Drawing Status: SUPPORT

H-2-817987, Sheet 1, Rev. 1, Title

IS: ELECTRICAL ETF TRUCK LOAD-IN FACILITY SITE PLAN

CHANGE TO: ELECTRICAL ETF TRUCK LOAD-IN STATION SITE PLAN

Drawing Status: SUPPORT

H-2-817987, Sheet 3, Rev. 1, Title

IS: ELECTRICAL ETF TRUCK LOAD-IN FACILITY SECTIONS & DETAILS

CHANGE TO: ELECTRICAL ETF TRUCK LOAD-IN STATION SECTIONS & DETAILS

Drawing Status: SUPPORT

H-2-817987, Sheet 4, Rev. 1, Title

IS: ELECTRICAL ETF TRUCK LOAD-IN FACILITY SECTIONS & DETAILS

CHANGE TO: ELECTRICAL ETF TRUCK LOAD-IN STATION SECTIONS & DETAILS

Drawing Status: SUPPORT

H-2-817988, Sheet 1, Rev. 1, Title

IS: ELECTRICAL ETF TRUCK LOAD-IN FACILITY PLAN, ONE-LINE & DETAILS

CHANGE TO: ELECTRICAL ETF TRUCK LOAD-IN STATION PLAN, ONE-LINE & DETAILS

Drawing Status: ESSENTIAL

H-2-817988, Sheet 2, Rev. 1, Title

IS: ELECTRICAL ETF TRUCK LOAD-IN FACILITY PLAN, GND & HEAT TRACING

CHANGE TO: ELECTRICAL ETF TRUCK LOAD-IN STATION PLAN, GND & HEAT TRACING

Drawing Status: ESSENTIAL

H-2-817988, Sheet 3, Rev. 1, Title

IS: ELECTRICAL ETF TRUCK LOAD-IN FACILITY PANEL SCHEDULE & DETAILS

CHANGE TO: ELECTRICAL ETF TRUCK LOAD-IN STATION PANEL SCHEDULE & DETAILS

Drawing Status: ESSENTIAL

H-2-817989, Sheet 1, Rev. 1, Title

IS: ELECTRICAL ETF TRUCK LOAD-IN FACILITY ELEMENTARY DIAGRAM

CHANGE TO: ELECTRICAL ETF TRUCK LOAD-IN STATION ELEMENTARY DIAGRAM

Drawing Status: ESSENTIAL

H-2-817990, Sheet 1, Rev. 1, Title

IS: ELECTRICAL ETF TRUCK LOAD-IN FACILITY WIRE & CONDUIT SCHEDULE

CHANGE TO: ELECTRICAL ETF TRUCK LOAD-IN STATION WIRE & CONDUIT SCHEDULE

Drawing Status: ESSENTIAL

H-2-817991, Sheet 2, Rev. 1, Title

IS: ELECTRICAL ETF TRUCK LOAD-IN FACILITY TELECOMMUNICATIONS

CHANGE TO: ELECTRICAL ETF TRUCK LOAD-IN STATION TELECOMMUNICATIONS

Drawing Status: SUPPORT

1 of 1

ENGINEERING CHANGE NOTICE

Page 1 of 5

1. ECN 649104

Proj. ECN

2. ECN Category (mark one)	3. Originator's Name, Organization, MSIN, and Telephone No.	4. USQ Required?	5. Date
Supplemental [x] Direct Revision [] Change ECN [] Temporary [] Standby [] Supersedure [] Cancel/Void []	AF Crane, 32910, S6-72, 372-3152	[] Yes [x] No	2/16/99
	6. Project Title/No./Work Order No. Truck Load-in Filter/CACN 106883 COA EK00	7. Bldg./Sys./Fac. No. 2025E/59A/ETF	8. Approval Designator N/A
	9. Document Numbers Changed by this ECN (includes sheet no. and rev.) See Block 13a	10. Related ECN No(s). 647275 648786	11. Related PO No. N/A

12a. Modification Work	12b. Work Package No.	12c. Modification Work Complete	12d. Restored to Original Condition (Temp. or Standby ECN only)
[x] Yes (fill out Blk. 12b) [] No (NA Blks. 12b, 12c, 12d)	EL-99-00071/M	Design Authority/Cog. Engineer Signature & Date	N/A Design Authority/Cog. Engineer Signature & Date

13a. Description of Change

13b. Design Baseline Document? [x] Yes [] No

Affected Drawings

H-2-817969, Sh 1, Rev 1
H-2-817969, Sh 2 Rev 1
H-2-817969, Sh 3 Rev 1
H-2-817970, Sh 1, Rev 1
H-2-817970, Sh 2, Rev 1

See attached continuation sheet for description of changes.

DAVID STEPHEN McNAMAR STATE OF WASHINGTON 0027710 REGISTERED PROFESSIONAL ENGINEER 2-18-99

EXPIRES 10/06/00

Construction to be in accordance with the requirements of construction specification W-291H-CZ.

14a. Justification (mark one)

Criteria Change	[x]	Design Improvement	[]	Environmental	[]	Facility Deactivation	[]
As-Found	[]	Facilitate Const	[]	Const. Error/Omission	[]	Design Error/Omission	[]

14b. Justification Details

Supplemental offload and filtration capability is required to simultaneously accept liquid wastes containing solids while receiving existing waste generator shipments.

Informal design review performed by EA McNamar

15. Distribution (include name, MSIN, and no. of copies)

MW Bowman	S6-72 (1)	EA McNamar	S6-72 (1)	WCC Planning	S6-71 (1)*
BS Darling	T4-05 (1)	DB Powell	T3-07 (1)	(* = 1 Advance Copy)	
AF Crane	S6-72 (1)*	CD Skogley	T4-05 (1)		
DL Flyckt	S6-72 (1)	DK Smith	S6-71 (1)		
JM Isdell	B4-39 (1)*	NJ Sullivan	S6-72 (1)		

RELEASE STAMP
DATE: FEB 18 1999
STA: 30
HANFORD RELEASE
ID: 18

A-7900-013-2 (05/96) GEF095

A-7900-013-1

ENGINEERING CHANGE NOTICE	Page 2 of 8	1. ECN 649104

16. Design Verification Required	17. Cost Impact ——> NA <—— ENGINEERING		CONSTRUCTION		18. Schedule Impact (days) ——> NA <——	
[X] Yes	Additional	[] $	Additional	[] $	Improvement	[]
[] No	Savings	[] $	Savings	[] $	Delay	[]

19. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 13. Enter the affected document number in Block 20.

SDD/DD	[NA]	Seismic/Stress Analysis	[NA]	Tank Calibration Manual	[NA]
Functional Design Criteria	[NA]	Stress/Design Report	[NA]	Health Physics Procedure	[NA]
Operating Specification	[NA]	Interface Control Drawing	[NA]	Spares Multiple Unit Listing	[NA]
Criticality Specification	[NA]	Calibration Procedure	[NA]	Test Procedures/Specification	[NA]
Conceptual Design Report	[NA]	Installation Procedure	[NA]	Component Index	[NA]
Equipment Spec	[NA]	Maintenance Procedure	[NA]	ASME Coded Item	[NA]
Const. Spec.	[NA]	Engineering Procedure	[NA]	Human Factor Consideration	[NA]
Procurement Spec.	[NA]	Operating Instruction	[NA]	Computer Software	[NA]
Vendor Information	[X]	Operating Procedure	[NA]	Electric Circuit Schedule	[NA]
OM Manual	[NA]	Operational Safety Requirement	[NA]	ICRS Procedure	[NA]
FSAR/SAR	[NA]	IEFD Drawing	[NA]	Process Control Manual/Plan	[NA]
Safety Equipment List	[NA]	Cell Arrangement Drawing	[NA]	Process Flow Chart	[NA]
Radiation Work Permit	[NA]	Essential Material Specification	[NA]	Purchase Requisition	[NA]
Environmental Impact Statement	[NA]	Fac. Proc. Samp. Schedule	[NA]	Tickler File	[NA]
Environmental Report	[NA]	Inspection Plan	[NA]		[]
Environmental Permit	[NA]	Inventory Adjustment Request	[NA]		[]

20. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

Document Number/Revision	Document Number/Revision	Document Number Revision
N/A		

21. Approvals

	Signature	Date
Design Authority AF Crane	AF Crane	2-19-99
Cog. Eng.		
Cog. Mgr. NJ Sullivan	NJ Sullivan	2-17-99
QA		
Safety		
Environ. DL Flyckt	DL Flyckt	2/11/99
Other		
Operations DK Smith	DK Smith	2-18-99
EA McNamar Informal Design Review	E.A. McNamar	2/16/99

	Signature	Date
Design Agent AF Crane	AF Crane	2-16-99
PE	David McGlown	2-18-99
QA		
Safety		
Design		
Environ.		
Other		

DEPARTMENT OF ENERGY

Signature or a Control Number that tracks the Approval Signature

ADDITIONAL

H-2-817969, Sh 1, Rev 1

Zone D-3: Add asphalt and concrete pad areas.

H-2-817969, Sh 2 Rev 1

Zone E-3: Add asphalt and concrete pad areas.

H-2-817969, Sh 3 Rev 1

Zone D-7: Add asphalt and concrete pad areas, and elevations.

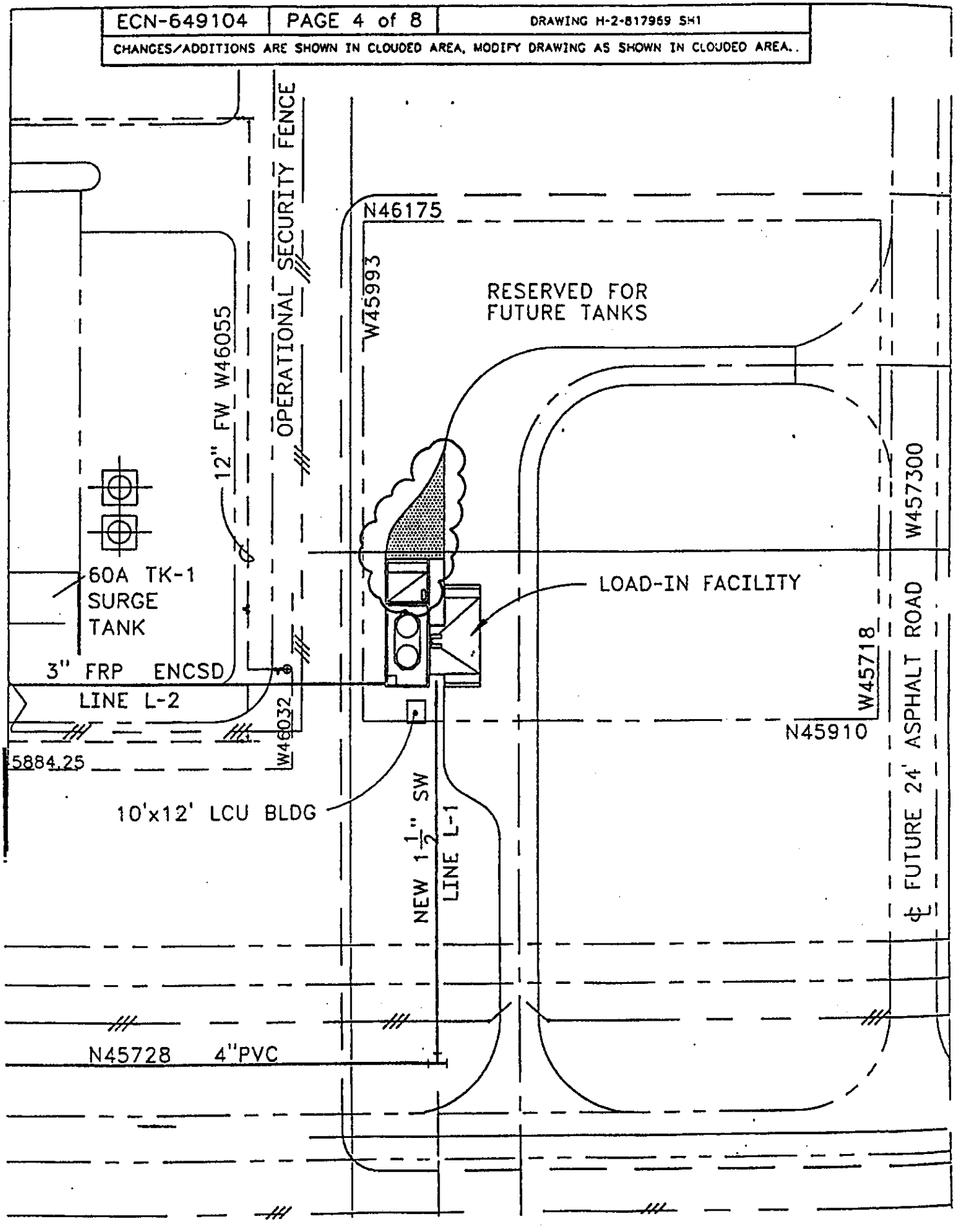
H-2-817970, Sh 1 Rev 1

Zones C/F-5/8: Add asphalt and concrete pad areas, filter skid, pump base, dimensional details and Section G reference.

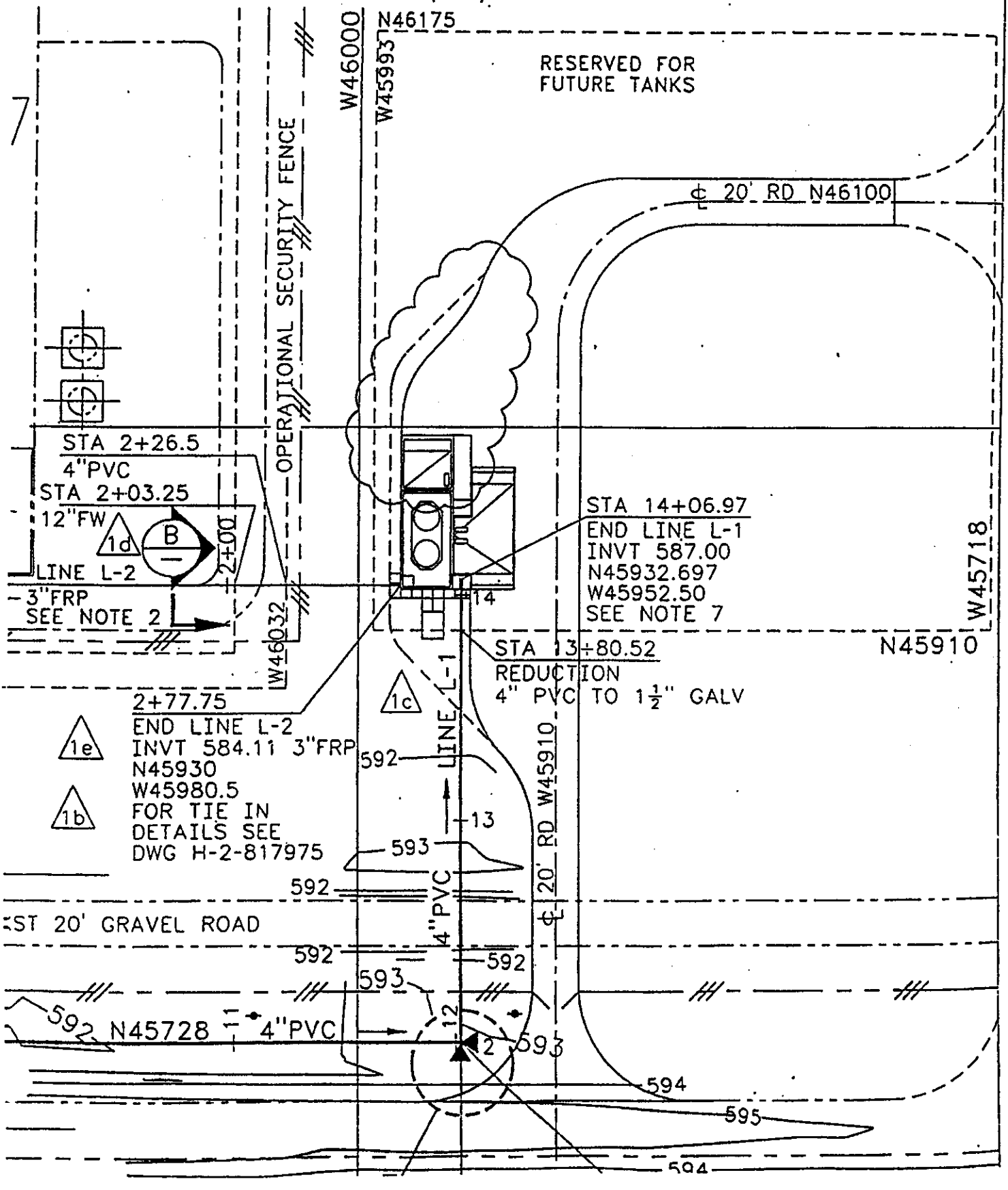
H-2-817970, Sh 2 Rev 1

Zones A/D-4/8: Add Sections F and G and Detail 6. Add note to Section E identifying elevations of respective pump pads.

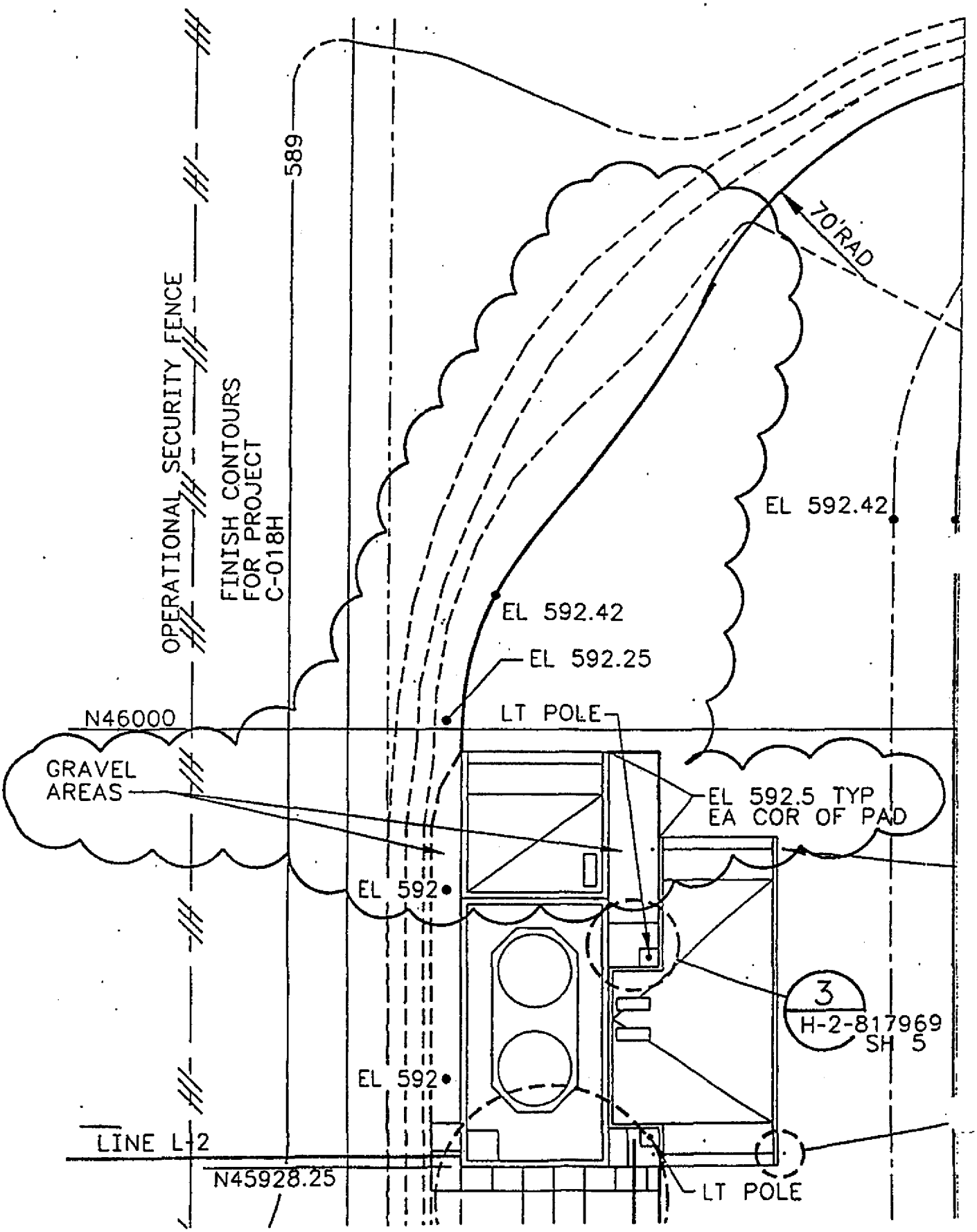
ECN-649104	PAGE 4 of 8	DRAWING H-2-817969 SH1
CHANGES/ADDITIONS ARE SHOWN IN CLOUDED AREA, MODIFY DRAWING AS SHOWN IN CLOUDED AREA..		

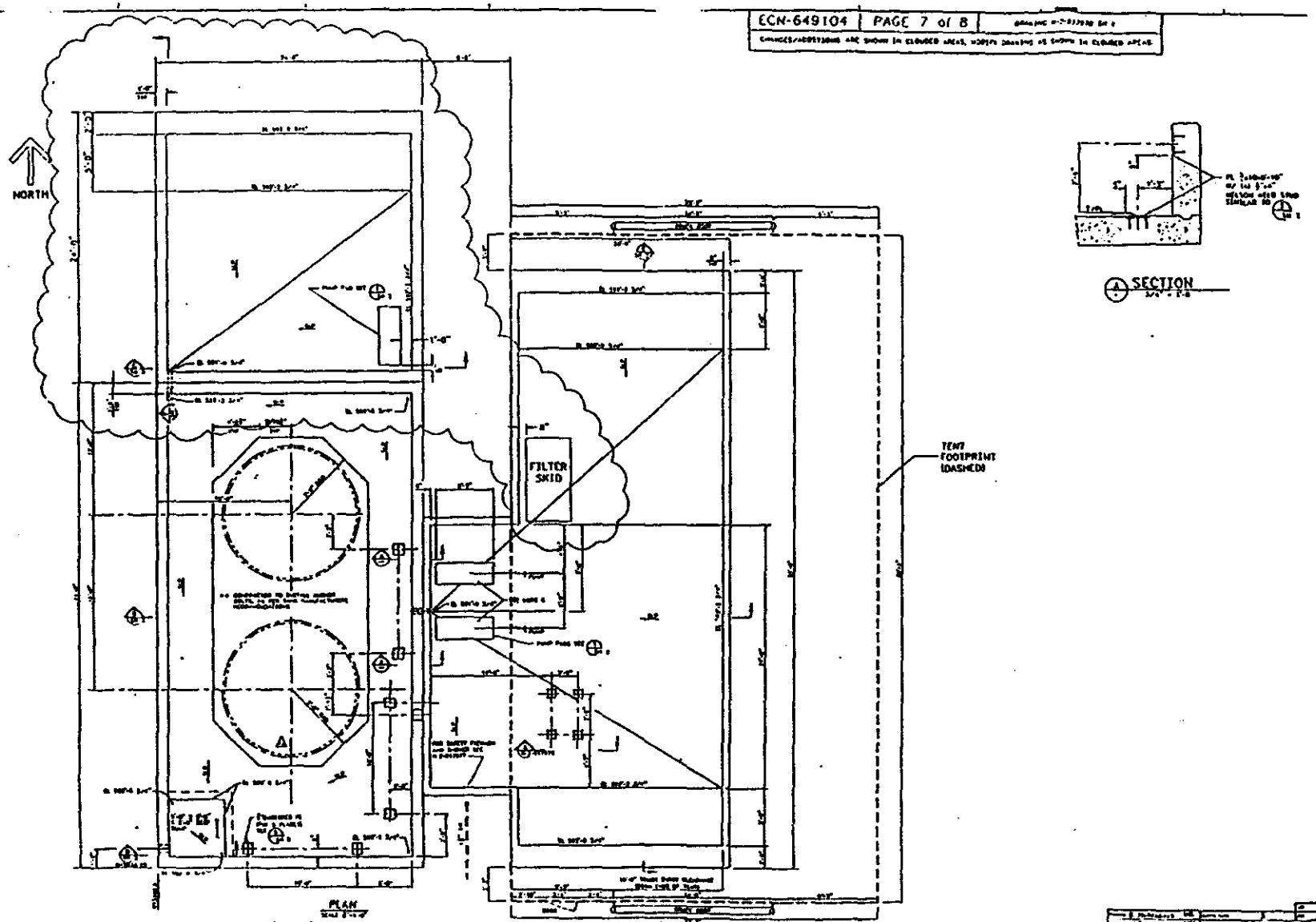


ECN-649104	PAGE 5 of 8	DRAWING H-2-817969 SH2
CHANGES/ADDITIONS ARE SHOWN IN CLOUDED AREA, MODIFY DRAWING AS SHOWN IN CLOUDED AREA.		



ECN-649104	PAGE 6 of 8	DRAWING H-2-817969 SH3
CHANGES/ADDITIONS ARE SHOWN IN CLOUDED AREA. MODIFY DRAWING AS SHOWN IN CLOUDED AREA.		



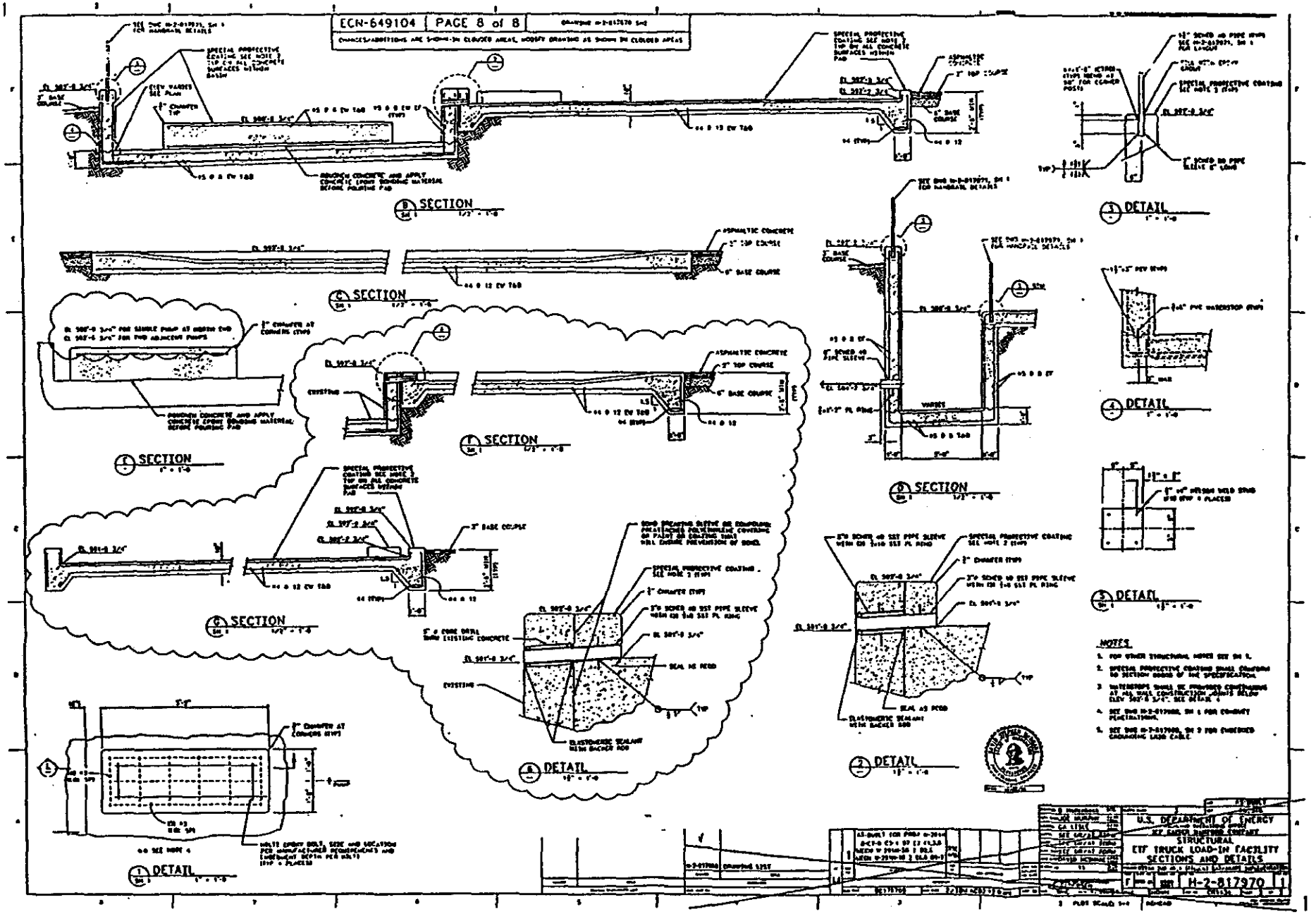


SECTION

U.S. DEPARTMENT OF ENERGY

STRUCTURAL
ETF TRUCK LOAD-IN FACILITY
PLAN AND SECTIONS

H-2-817970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U.S. DEPARTMENT OF ENERGY
STRUCTURAL
ETF TRUCK LOAD-IN FACILITY
SECTIONS AND DETAILS
H-2-817970

Hanford Facility RCRA Permit Modification Notification Forms
Part III, Chapter 5 and Attachment 35
242-A Evaporator

Index

Hanford Facility RCRA Permit Modification Notification Form

Unit:	Permit Part & Chapter:
242-A Evaporator	**Part III, Chapter 5 and Attachment 35**

Description of Modification:

Hanford Facility RCRA Permit, III.5.A.:

III.5.A. COMPLIANCE WITH APPROVED PERMIT APPLICATION

The Permittees shall comply with all requirements set forth in Attachment 35, including the Amendments specified in Condition III.5.B, if any exist. Enforceable portions of the application are listed below; all subsections, figures, and tables included in these portions are also enforceable, unless stated otherwise):

Part A, Form 3, Permit Application, Revision 7

Section 2.2	Topographic Map, (non-enforceable sections in Chapter 2 were modified in Class 1 Modification) from quarter ending March 31, 20001
Section 3.2	Waste Analysis, from Class 1 Modification for quarter ending March 31, 2001
Chapter 4.0	Process Information, from Class 1 Modification for quarter ending March 31, 2000
Chapter 6.0	Procedures to Prevent Hazards, dated May 1998, from Class 1 Modification for quarter ending March 31, 2001 ~~as amended in Class 2 Modification for Revision 5~~
Chapter 7.0	Contingency Plan, ~~dated May 1998~~, from Class 1 Modification for quarter ending September 30, 2000
Chapter 8.0	Personnel Training
Chapter 11.0	Closure and Financial Assurance, from Class 1 Modification for quarter ending June 30, 1998
Chapter 12.0	Reporting and Recordkeeping, from Class 1 Modification for quarter ending March 31, 2001
Chapter 13.0	Other Federal and State Laws, from Class 1 Modification for quarter ending March 31, 2001
Appendix 2A	Topographic Map
Appendix 3A	Waste Analysis Plan for 242-A Evaporator, from Class 1 Modification from quarter ending March 31, 1998
Appendix 4A	Engineering Drawings, from Class 1 Modification for quarter ending March 31, 2000
Appendix 4B	The 242-A Evaporator/Crystallizer Tank System Integrity Assessment Report
Appendix 7A	Building Emergency Plan for 242-A Evaporator, from Class 1 Modification for quarter ending September 30, 2000 Enforceable portions include Sections 1.5, 3.1, 4.0 (1st paragraph), 7.1, 7.1.1, 7.1.2, 7.2, 7.2.1, 7.2.2, 7.2.3, 7.2.4, 7.2.5, 7.2.5.1, 7.3, 8.2, 8.3, 8.4, 9.0, 9.1, 9.2, 9.3, 9.4, 9.5, 9.6, 11.0, 12.0, and 13.0.
Appendix 8A	200 Area Liquid Waste Processing Facilities Administrative Policies, Dangerous Waste Training Plan from Class 1 Modification for quarter ending June 30, 1998

Modification Class: [1] [2] [3]	Class 1	Class [1]1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation

A. General Permit Provisions

1. Administrative and informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
7/11/01	APR 06 2001		
E. S. Aromi Date	G. H. Sanders Date	F. Jamison Date	L.E. Ruud Date

[1] Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit:	Permit Part & Chapter:
242-A Evaporator	**Part III, Chapter 5 and Attachment 35**

Description of Modification:

Remove Chapters 3.0, 6.0, 12.0, and 13.0 and replace with the attached Chapters 3.0, 6.0, 12.0, and 13.0.

These sections were converted from WordPerfect to Microsoft Word, which resulted in formatting changes. No changes were made to the text.

Modification Class: [1] [2] [3]	Class 1	Class [1]1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation

A. General Permit Provisions

1. Administrative and informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
EQC 2/14/01	APR 06 2001		
E. S. Aromi Date	G. H. Sanders Date	F. Jamison Date	L.E. Ruud Date

[1] Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit:	Permit Part & Chapter:
242-A Evaporator	**Part III, Chapter 5 and Attachment 35**

Description of Modification:

Remove Appendix 4A and replace with the attached Appendix 4A.

Table 4A-1. Process and Instrumentation Diagrams.

System	Drawing Number	Outstanding ECNs	Drawing Title
Vapor-Liquid Separator	H-2-98988 Sh. 1, Rev. 67	~~ECN-647922~~ None	P & ID Evap Recirc System
Reboiler/Recirculation Line	H-2-98988 Sh. 2, Rev. 5	~~ECN-613444~~ None	P & ID Evap Recirc System
Slurry System	H-2-98989 Sh. 1,Rev. 10	~~None~~ ECN-662012	P & ID Slurry System
Condensate Collection Tank	H-2-98990 Sh. 1,Rev. 910	None	P & ID Process Condensate System
Secondary Containment Drain System	H-2-98995 Sh. 1, Rev. 11	~~None~~ ECN-664301	P & ID Drain System
Secondary Containment Drain System	H-2-98995 Sh. 2, Rev. 5	None	P & ID Drain System
Condensers	H-2-98999 Sh. 1, Rev. 11	None	P & ID Vacuum Condenser System
Pump Room Sump	H-2-99002 Sh. 1, Rev. 5	ECN-647885	P & ID Jet Gang Valve System
Condensate Recycle System	H-2-99003 Sh. 1, Rev. ~~10~~12	~~ECN-627940~~ ~~ECN647922~~ None	P & ID Filtered Raw Water System

Modification Class: [1] [2] [3]	Class 1	Class [1]1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation

A. General Permit Provisions

1. Administrative and informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
E. S. Aromi 3/14/01	G.H. Sanders	F. Jamison	L.E. Ruud
Date	Date	Date	Date

[1] Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit:	Permit Part & Chapter:
242-A Evaporator	***Part III, Chapter 5 and Attachment 35***

Description of Modification:

Remove Appendix 4A and replace with the attached Appendix 4A.

Table 4A-2. Drawing of 242-A Evaporator Secondary Containment Systems.

System	Drawing Number	Outstanding ECNs	Drawing Title
242-A Building	H-2-69277 Sh 1, Rev 2	None	*Structural Foundation Plan Sections & General Notes - Areas 1 & 2*
	H-2-69278 Sh 1, Rev 3	None	Structural Foundation Elevations & Details - Areas 1 & 2
	H-2-69279 Sh 1, Rev 3	None	Structural First Floor Plan & AMU - Areas 1 & 2
Pump Room Sump Drainage	H-2-69352 Sh 1, Rev 4	ECN-121216 ECN-121238 ECN-194242 ECN-610629 ECN-620353	Sections Process Waste Drainage
242-A Building Drainage	H-2-69354 Sh 1, Rev 4	ECN-194242 ECN-610629 ECN-620353	Plan Process Waste Drainage
Pump Room Sump	H-2-69369 Sh 1, Rev 1	None	Pump Room Sump Assembly & Details

Modification Class: [1] [2] [3]	Class 1	Class [1]1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation

A. General Permit Provisions

1. Administrative and informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
E. S. Aromi Date 7/14/01	G. H. Sanders Date APR 06 2001	F. Jamison Date	L.E. Ruud Date

[1] Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit Modification Notification
Part III, Chapter 5 and Attachment 35
242-A Evaporator

Replacement Chapters

Index

HANFORD FACILITY DANGEROUS WASTE PERMIT APPLICATION, 242-A EVAPORATOR

FOREWORD

The *Hanford Facility Dangerous Waste Permit Application* is considered to be a single application organized into a General Information Portion (document number DOE/RL-91-28) and a Unit-Specific Portion. The scope of the Unit-Specific Portion is limited to Part B permit application documentation submitted for individual, 'operating' treatment, storage, and/or disposal units, such as the 242-A Evaporator (this document, DOE/RL-90-42).

Both the General Information and Unit-Specific portions of the *Hanford Facility Dangerous Waste Permit Application* address the content of the Part B permit application guidance prepared by the Washington State Department of Ecology (Ecology 1987 and 1996) and the U.S. Environmental Protection Agency (40 Code of Federal Regulations 270), with additional information needs defined by the *Hazardous and Solid Waste Amendments* and revisions of Washington Administrative Code 173-303. For ease of reference, the Washington State Department of Ecology alpha-numeric section identifiers from the permit application guidance documentation (Ecology 1996) follow, in brackets, the chapter headings and subheadings. A checklist indicating where information is contained in the 242-A Evaporator permit application documentation, in relation to the Washington State Department of Ecology guidance, is located in the Contents Section.

Documentation contained in the General Information Portion is broader in nature and could be used by multiple treatment, storage, and/or disposal units (e.g., the glossary provided in the General Information Portion). Wherever appropriate, the 242-A Evaporator permit application documentation makes cross-reference to the General Information Portion, rather than duplicating text..

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DOCUMENT CONTENTS

APPENDICES

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METRIC CONVERSION CHART

Into metric units			Out of metric units		
If you know	Multiply by	To get	If you know	Multiply by	To get
Length			**Length**		
inches	25.40	millimeters	millimeters	0.0393	inches
inches	2.54	centimeters	centimeters	0.393	inches
feet	0.3048	meters	meters	3.2808	feet
yards	0.914	meters	meters	1.09	yards
miles	1.609	kilometers	kilometers	0.62	miles
Area			**Area**		
square inches	6.4516	square centimeters	square centimeters	0.155	square inches
square feet	0.092	square meters	square meters	10.7639	square feet
square yards	0.836	square meters	square meters	1.20	square yards
square miles	2.59	square kilometers	square kilometers	0.39	square miles
acres	0.404	hectares	hectares	2.471	acres
Mass (weight)			**Mass (weight)**		
ounces	28.35	grams	grams	0.0352	ounces
pounds	0.453	kilograms	kilograms	2.2046	pounds
short ton	0.907	metric ton	metric ton	1.10	short ton
Volume			**Volume**		
fluid ounces	29.57	milliliters	milliliters	0.03	fluid ounces
quarts	0.95	liters	liters	1.057	quarts
gallons	3.79	liters	liters	0.26	gallons
cubic feet	0.03	cubic meters	cubic meters	35.3147	cubic feet
cubic yards	0.76456	cubic meters	cubic meters	1.308	cubic yards
Temperature			**Temperature**		
Fahrenheit	subtract 32 then multiply by 5/9ths	Celsius	Celsius	multiply by 9/5ths, then add 32	Fahrenheit
Force			**Force**		
pounds per square inch	6.895	kilopascals	kilopascals	1.4504×10^{-4}	pounds per square inch

Source: *Engineering Unit Conversions*, M. R. Lindeburg, PE., Second Ed., 1990, Professional Publications, Inc., Belmont, California.

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CONTENTS

APPENDIX

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3.0 WASTE CHARACTERISTICS [C]

This chapter provides information on the chemical, biological, and physical characteristics of the waste treated, stored, and generated at the 242-A Evaporator. The waste acceptance criteria are included in the waste analysis plan (Appendix 3A).

3.1 CHEMICAL, BIOLOGICAL, AND PHYSICAL ANALYSES [C-1]

This section discusses the chemical, biological, and physical analyses of waste at the 242-A Evaporator.

3.1.1 Characteristics of Waste Treated at the 242-A Evaporator

Waste processed at the 242-A Evaporator is received from the DST System. The mixed waste is an aqueous solution containing dissolved cations and anions such as sodium, potassium, aluminum, hydroxides, nitrates, and nitrites. Small quantities of ammonia and organics also could be present. Waste received in the DST System has been chemically adjusted to be compatible with materials used for construction of the DST System and the 242-A Evaporator.

Example analysis of DST System waste processed through the 242-A Evaporator is available in *Characterization of Double Shell Tank for Evaporator 242 Project - Tank 241-AP-101* (WHC 1994a) and *Characterization of Double Shell Tank for Evaporator 242 Project - Tank 241-AP-107* (WHC 1994b).

Waste transferred to the 242-A Evaporator could be assigned any of the dangerous waste numbers found in the Part A, Form 3 (Chapter 1.0). These dangerous waste numbers are identical to those in the Part A, Form 3, for the DST System.

3.1.2 Characteristics of Waste Streams Generated at the 242-A Evaporator

Two mixed waste streams are generated at the 242-A Evaporator: slurry and process condensate. The slurry stream contains the same components as the DST System waste with increased concentrations and most of the volatile constituents transferred to the process condensate. An example of analysis of slurry stream is available in *222-S Characterization of 242-A Evaporator Slurry, Campaign 94-1* (WHC 1994c). The dangerous waste numbers for the waste feed, given in Chapter 1.0, are applicable to the slurry waste returned to the DST System.

The process condensate is condensed vapor from the evaporation process. The process condensate consists of water with small amounts of ammonia and volatile organics. Trace quantities of radionuclides and inorganic constituents also are present. An example of analysis of process condensate is available in *Data Validation Report for 242A Evaporator Process Condensate*, (three reports: WHC 1994d). A discussion of the dangerous waste numbers assigned to the process condensate stream is given in the waste analysis plan (Appendix 3A).

The slurry and process condensate waste streams generated and stored at the 242-A Evaporator are restricted from land disposal, per 40 CFR 268, until additional treatment is performed. Treatment of the slurry stream returned to the DST System is under development. Treatment of process condensate stream is performed at the LERF and 200 Area ETF.

A discussion of organic air emission subject to WAC 173-303-690 and 40 CFR 264, Subpart AA, are given in the waste analysis plan (Appendix 3A) and in Chapter 4.0.

Other waste generated by 242-A Evaporator operations include decontamination solution waste and secondary waste. The most common decontamination solution is water, but nitric or citric acids could be used. Decontamination waste is collected in the 242-A Evaporator tanks, chemically adjusted to meet DST System requirements, and transferred to the DST System.

Secondary waste, generated during operations and maintenance work, consists of, but is not limited to, dry solid materials (such as failed equipment, paper towels, and rags) contaminated with dangerous and/or mixed waste. Secondary waste is containerized and transferred to a permitted TSD unit. Secondary waste containers are not stored at the 242-A Evaporator for greater than 90 days.

3.2 WASTE ANALYSIS PLAN [C-2]

Appendix 3A contains the waste analysis plan.

CONTENTS

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5.0 GROUNDWATER MONITORING [E]

The 242-A Evaporator is not operated as a dangerous or mixed waste surface impoundment, waste pile, land treatment unit, or landfill as defined in WAC 173-303-645(1)(a). Therefore, groundwater monitoring is not required.

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CONTENTS

TABLES

6.0 PROCEDURES TO PREVENT HAZARDS [F]

This chapter discusses security, inspection schedules, preparedness and prevention requirements, preventive procedures, structures, and equipment, and prevention of reaction of ignitable, reactive, and incompatible waste for the 242-A Evaporator.

6.1 SECURITY [F-1]

The following sections describe the security measures, equipment, and warning signs used to control entry to the 242-A Evaporator. Hanford Facility security measures are discussed in the General Information Portion (DOE/RL-91-28).

6.1.1 Security Procedures and Equipment [F-1a]

The following sections describe the 24-hour surveillance system, barriers, and warning signs used to provide security and control access to the 242-A Evaporator.

6.1.1.1 24-hour Surveillance System

The entire Hanford Facility Site is a controlled-access area with around-the-clock access control. For surveillance information refer to the General Information Portion (DOE/RL-91-28).

6.1.1.2 Barrier and Means to Control Entry

All 242-A Evaporator mixed waste tanks and equipment are located within the 242-A Building, which is protected by the building structure and secured entrances. The main entrance, on the east side of the building, and the office entrances, on the south side of the building, are open during normal day shift hours. All other external entrances, including external entrances to areas containing mixed waste, are secured. Visitors are required to check in at the control room and must be escorted when entering areas of the 242-A Evaporator where they might be exposed to mixed waste. All entrances are secured when the building is not staffed. Security lighting is provided around the outside of the building.

6.1.1.3 Warning Signs

Signs bearing the legend "DANGER-- HAZARDOUS MATERIAL - UNAUTHORIZED PERSONNEL KEEP OUT," or equivalent legend, legible from a distance of 7.6 meters, are posted on entrances to rooms at the 242-A Evaporator Building that could contain mixed waste. In addition, there are posted signs at the main entrance and other office entrances instructing visitors to report to the control room for access to the 242-A Evaporator.

6.1.2 Waiver [F-1b]

A waiver of security procedures and equipment requirements is not requested for the 242-A Evaporator. Therefore, the waiver requirements outlined in WAC 173-303-310(1)(a) and (b) are not applicable.

6.2 INSPECTION PLAN [F-2]

This section describes the method and schedule for inspections of the 242-A Evaporator. The purpose of inspections is to identify situations that might cause or lead to a release of mixed waste that could pose a threat to human health and the environment. Abnormal conditions identified by an inspection must be corrected on a schedule that prevents hazards to the public and environment.

6.2.1 General Inspection Requirements [F-2a]

This section provides an overview of inspections performed at the 242-A Evaporator. A copy of the inspection plan is kept in the 242-A Evaporator control room. There are three general classes of inspections at the 242-A Evaporator:

- Continuous monitoring of remote instrumentations and alarms are performed by operating personnel in the 242-A Evaporator control room using the MCS computer.
- Visual inspections of tanks and equipment are performed by operating personnel. Some inspections of fire protection equipment, such as sprinkler system inspections, are performed by the Hanford Fire Department.
- Preventive maintenance of equipment and calibration of instruments are performed by maintenance personnel. A computerized tracking system is used to identify and schedule preventive maintenance and calibration activities.

Preventive maintenance and instrument calibrations on certain equipment might not be possible when the 242-A Evaporator is operating. Because of the limited duration of 242-A Evaporator campaigns, these activities are scheduled during outages between campaigns to avoid interference with operating activities.

6.2.1.1 Types of Problems

The 242-A Evaporator inspections include, but are not limited to, the following:

- Condition of tanks and ancillary equipment
- Condition of secondary containment
- Evidence of leaks or overflows from tanks, piping, or transfer lines
- Condition of security equipment
- Condition of safety, communications, and emergency equipment.

A schedule of inspections, including items to be inspected, problems to look for, frequency of inspections, and responsible organization are provided in Tables 6-1 through 6-4.

6.2.1.2 Frequency of Inspections

The frequency of inspections is based on the significance of a failure of the equipment and on regulatory requirements, Hanford Site and industry standards, and past experience of the nature and frequency of equipment failures.

The frequency of inspections for the 242-A Evaporator are given in Tables 6-1 through 6-4. Examples of frequencies include:

- Daily (at least every 24 hours) - visual inspections of tanks, piping and secondary containment.

- Weekly (at least every 7 days) - visual inspections of personal protective equipment, exterior lighting, and posted warning signs.
- Monthly (at least every 31 days) - inspections of emergency sirens, fire extinguishers, safety showers, emergency lighting and the spill control kit.
- Bimonthly (at least every 62 days) - inspection of cathodic protection system rectifiers.
- Annually (at least every 365 days) - instrumentation calibrations, cathodic protection system testing, fire inspections.

Leak detectors are functionally checked within 92 days of the start of a campaign and every 92 days thereafter until the campaign is over. The frequency of some alarm monitoring is continuous. This means an operator must be present in the control room to monitor alarm instruments that continuously check for conditions such as leaks and high sump levels. Continuous monitoring is only required when the system is operating.

6.2.2 Tank System Inspections and Corrective Actions [F-2d(2)]

This section discusses the inspections performed on the two tank systems at the 242-A Evaporator: the vapor-liquid separator, C-A-1, and the condensate collection tank, C-100. Inspections include secondary containment and leak and overfill prevention equipment.

6.2.2.1 Overfill Prevention

The vapor-liquid separator, C-A-1, is equipped with instrumentation that alarms before the tank reaches a level where the tank could overflow or entrain liquid waste into the vacuum condenser system. The alarm annunciates in the control room allowing operating personnel to take immediate action to stop the vapor-liquid separator from overfilling.

The condensate tank, C-100, was designed with an overflow line that routes waste to the feed tank, 241-AW-102. This design prevents tank overflow to the condenser room.

6.2.2.2 Visual Inspections

Visual inspections of tanks and secondary containments are performed to check for leaks, signs of corrosion or damage, and malfunctioning equipment. Inspections also include housekeeping checks to ensure aisle space requirements are met. The following rooms containing dangerous waste are inspected:

- Condenser room
- Pump room
- Loadout and hot equipment storage room
- Loading room
- Ion exchange column room.

In addition, the AMU room is inspected when hazardous materials are present in the room. Inspection of the ion exchange column room is required only when mixed waste is present in the ion exchange column or piping.

The vapor-liquid separator is located in the evaporator room, with a portion of the recirculation loop located in the pump room. Because of the high radiation dose in the evaporator room, visual inspections

cannot be performed. Leaks in the evaporator room drain to the pump room sump; monitoring of the pump room sump instrumentation is performed to determine if leaks have occurred. Visual inspection of the portion of the recirculation loop located in the pump room is performed through the shielding window on the AMU mezzanine.

6.2.2.3 Leak Detectors

Conductivity probe leak detectors are installed to measure leaks to secondary containment of the feed transfer line, slurry line, and drain lines connecting the 242-A Evaporator to AW Tank Farm. The slurry and drain lines are equipped with cleanout boxes that also have leak detectors. The sample enclosures in the loadout and hot equipment storage room have leak detectors for both the feed and slurry samplers. For information on these systems and their secondary containment, refer to Chapter 4.0, Section 4.1.4.

Leaks to secondary containment in the evaporator room, pump room, loadout and hot equipment storage room, and loading room drain to the pump room sump. The sump high level alarm serves as a leak detector for these rooms. For information on the rooms and their drain systems, refer to Chapter 4.0, Section 4.1.4.

6.2.2.4 Cathodic Protection

An active cathodic protection system is installed in the 200 East Area Tank Farms to protect underground piping, including the feed transfer, slurry, and drain lines, from galvanic corrosion. The system consists of rectifiers providing direct current to buried anodes that direct the current to the soil. Test stations are located along the system to determine operability by taking readings on the system. The installation is according to the recommended practices of NACE.

Rectifiers are checked for signs of damage or component degradation at least every 2 months for cathodic protection systems. Operability testing of the cathodic protection system is performed annually.

6.2.2.5 Tank Assessments

The IAR was issued in 1993 (Appendix 4C). The frequency and nature of these assessments are discussed in the IAR.

6.2.3 Storage of Reactive and Ignitable Wastes [F-2d(3)]

The Hanford Fire Department performs annual fire inspections of the 242-A Evaporator using a checklist developed specifically for facilities that handle dangerous and/or mixed waste. The checklist was developed from requirements in the Uniform Fire Code and the National Fire Protection Association code. A copy of the completed checklist is given to operating management to take remedial actions for any problems identified. The completed checklist is included in the operating record and also is available from the Hanford Fire Department.

6.2.4 Air Emissions Control and Detection Inspections [F-2d(4)]

The process vent at the 242-A Evaporator is subject to 40 CFR 264, Subpart AA, which requires organic emissions be limited to 1.4 kilograms per hour, and 2.8 megagrams per year, or controls be installed to reduce organic emissions by 95 percent. Organic concentrations in the waste processed at the 242-A Evaporator are limited to ensure the values of 1.4 kilograms per hour and 2.8 megagrams per year

are not exceeded. Therefore, no emission control devices are installed on the 242-A Evaporator vessel ventilation system and no inspections are required (Chapter 4.0, Section 4.2).

6.2.5 Inspection Logs [F-2b]

Visual inspections are performed using inspection log sheets (also called round sheets) that outline frequency, the components to inspect, and types of problems. Log sheets are kept in the 242-A Evaporator control room. Inspectors record the following information:

- Date and time of the visual inspection
- Printed name and signature of the person performing the inspection
- Notations of the observations made, including space for writing comments.

Completed log sheets are reviewed and approved by the shift supervisor, collected, and stored for at least 5 years.

Maintenance inspections are performed as part of the maintenance job control system. After completion, the maintenance documentation is reviewed and signed.

6.2.6 Schedule for Remedial Action for Problems Revealed [F-2c]

If while performing a visual inspection (Table 6-1), a leak or spill is discovered, facility management responds immediately per the building emergency plan (Chapter 7.0). Action is taken to stop the leak and determine the cause. The waste is removed from the secondary containment within 24 hours or in a timely manner that prevents harm to human health and the environment. For spills that drain to the pump room sump, the sump must be emptied and rinsed three times (Chapter 4.0, Section 4.1.5).

If an alarm activates during inspections, an operator responds immediately and implements appropriate actions.

If an inspection identifies equipment that is missing, damaged, or not operating properly, the operator records the problem on a deficiency log in the 242-A Evaporator control room. Repair work is prioritized by facility management to mitigate health risks to workers, maintain integrity of the facility, and prevent hazards to public health and the environment. The Hanford Fire Department repairs fire prevention equipment.

6.3 PREPAREDNESS AND PREVENTION REQUIREMENTS [F-3]

The following sections document the preparedness and prevention measures taken at the 242-A Evaporator.

6.3.1 Equipment Requirements [F-3a]

The following sections describe the internal and external communications and emergency equipment located at the 242-A Evaporator.

6.3.2 Internal Communications

The 242-A Evaporator is equipped with internal communication systems to provide immediate emergency instruction to facility personnel. The onsite communication systems at the 242-A Evaporator include telephones, hand-held two-way radios, a public address system, and alarm systems. The telephone and radio systems provide for internal and external communication. Alarm systems allow facility personnel to appropriately respond to various emergencies, including building evacuations, take cover events, fires and/or explosions. The locations of telephones, public address systems, and alarms are given in the Building Emergency Plan (Appendix 7A).

Immediate emergency instruction to personnel is provided by a public address system using speaker horns and speakers located throughout the 242-A and 242-AB Buildings and outside.

6.3.2.1 External Communications

The 242-A Evaporator is equipped with devices for summoning emergency assistance from the Hanford Fire Department, the Hazardous Materials Response Team, and/or local emergency response teams, as necessary. External communication is made through the normal telephone system. In addition, the following systems are available for external communication with persons assigned to emergency response organizations:

- A crash alarm telephone is available in the 242-A Evaporator control room. The crash alarm telephone system provides communication of centralized emergency response instructions to 242-A Evaporator personnel
- Fire alarm pull boxes and fire sprinkler flow monitoring devices are connected to a system monitored around the clock by the Hanford Fire Department
- Telephone number 911 (811 if using a cellular phone) is the contact point for the Hanford Site; on notification, the Hanford Patrol Operations Center notifies and/or dispatches required emergency responders
- Telephone number 373-3800 is the single point of contact for the Hanford Site emergency duty officer; this number can be dialed from any Hanford telephone

During certain periods, only one operator may be present at the facility. This operator has access to external communication using telephones located throughout the building.

6.3.2.2 Emergency Equipment

Emergency equipment is available throughout the 242-A Building. The locations of telephones, public address systems, and alarms are given in the building emergency plan (Appendix 7A).

Major fire damage is unlikely at the 242-A Evaporator because of the concrete construction and because the amount of combustible material is minimal. A temperature-activated water sprinkler system, emergency lights, fire alarms pull boxes, and fire extinguishers are located throughout the facility. The Hanford Fire Department is capable of providing rapid response to major fires at the 242-A Evaporator and its vicinity, with a fire hydrant located near the east side of the facility.

Safety showers are located in the areas where personnel are most likely to have direct exposure of hazardous materials: in the AMU room and on the first and fourth floors of the condenser room. Water for these devices is supplied from the sanitary water system. Self-contained breathing apparatus units are

available in the control room for use throughout the 242-A Building. Respirators are located in the PPE storage room near the entryway to the condenser room. Other PPE, such as hazardous material protective gear and special work procedure clothing, are located in cabinets in the survey area. If required, PPE is donned before entry into the rooms containing mixed waste. The level of personal protective equipment required depends on the level of contamination in the area being entered and the activity being performed.

A spill control kit is located in a cabinet near the door to the PPE storage room. An inventory of the equipment in the spill kit is included inside the cabinet. The spill kit cabinet door seal is checked monthly to ensure the kit has not been used. The kit inventory is inspected annually.

The 242-A Evaporator operating personnel are trained in the use of emergency equipment (Chapter 8.0). Additionally, the Hanford Facility maintains a sufficient inventory of heavy equipment (e.g., bulldozers, cranes, road graders) for emergency response.

6.3.2.3 *Water for Fire Control*

Water for fire protection is supplied from the 200 East Area raw water system. Columbia River water is supplied to the fire control system from the 282-E Water Supply Reservoir. The water distribution system is sized to provide adequate volume and pressure to supply fire fighting needs under normal and emergency conditions. A fire hydrant is located approximately 10 meters east of the main entrance on the east side of the 242-A Building.

In the event that the sprinkler system at the 242-A Evaporator does not put out a fire, or the sprinkler system is damaged during an accident, each Hanford Fire Department fire station normally has a fire engine, equipped with a hydraulically operated aerial ladder, available to fight the fire. A pumper (fire engine without a boom) is used if the aerial ladder fire engine is inoperable. Fire engines have a pumping capacity of at least 5,600 liters of water per minute.

6.3.3 Aisle Space Requirement [F-3b]

Sufficient aisle space is maintained on the exterior of the 242-A Evaporator to allow access of personnel and equipment responding to fires, spills, or other emergencies. Unobstructed fire lanes run from Fourth Street and Canton Avenue to the 242-A Building main entrance to allow emergency vehicle access to the main entrance and the nearby fire hydrant.

The 242-A Building interior aisle space is designed to allow access by emergency response personnel while maintaining barriers to contain releases of gaseous or liquid waste and hazardous material. Walkways in the rooms containing mixed waste are checked daily to ensure the walkways have not been obstructed by portable equipment, trash, etc.

6.4 PREVENTIVE PROCEDURES, STRUCTURES, AND EQUIPMENT [F-4]

The following sections describe preventive procedures, structures, and equipment.

6.4.1 Loading and Unloading Operations [F-4a]

The feed transfer and slurry lines between the 242-A Evaporator and AW Tank Farm are constructed of carbon steel piping with secondary containment and leak detection in a pipe-within-a-pipe arrangement. Although the regulations exempt systems that serve as secondary containment from requiring secondary containment, two of the drain lines from the 242-A Evaporator to AW Tank Farm also have outer encasement piping and leak detection (refer to Chapter 4.0, Section 4.1.4, for information on these lines).

Waste transfers within the 242-A Building are contained by the secondary containment walls, floors and drains (refer to Chapter 4.0, Section 4.1.4, for information on secondary containment at the 242-A Evaporator).

There are no mixed waste storage containers loaded or unloaded at the 242-A Evaporator. Unloading operations occur when equipment contaminated with mixed waste exits the facility. Such materials are fully sealed in plastic with absorbent material to absorb any free liquid present. Because of these requirements, the likelihood of a spill outside the 242-A Building during this operation is extremely low.

6.4.2 Run-Off [F-4b]

All liquid waste handling at the 242-A Evaporator occurs within tank systems with secondary containment. All rooms containing mixed waste have drains that route to either the pump room sump or the feed tank, 241-AW-102. The pump room sump overflows to the feed tank as well. Therefore, run-off from a major leak, such as a break in a large water line within the 242-A Building, would be contained within the facility or drained to the feed tank (refer to Chapter 4.0, Section 4.1.4 for information on secondary containment and drain systems).

6.4.3 Water Supplies [F-4c]

Raw and sanitary Columbia River water are supplied to the 242-A Evaporator via separate underground lines from the 282-E Water Supply Reservoir. Raw water is filtered to prevent organisms and other debris from clogging valves, fire hydrants, and other equipment. Sanitary water is filtered and treated before distribution through a piping system separate from the raw water system.

The raw water supply to the 242-A Evaporator enters the 242-A-81 Water Service Building, passing through a strainer and backflow preventer before entering the facility. The backflow preventer ensures contaminated water cannot flow back into the raw water system. A second backflow preventer is installed in the 242-A Building on the raw water supply line connecting with the condensate recycle line. This system allows either raw water or process condensate to be used for the pump seal water and deentrainment pad spray water without risk of contamination of the raw water system.

The sanitary water system provides water to the lunchroom, drinking fountains, men's and women's changerooms, safety showers, and supply ventilation system air washers. There are no connections between sanitary water and any system or piping containing mixed waste.

6.4.4 Equipment and Power Failures [F-4d]

Standby power is provided by a diesel generator located southeast of the 242-A Building. The diesel motor starts automatically on loss of electrical power and has sufficient fuel to operate the generator to

safely shut down the evaporator process. An uninterruptible power supply system also is provided to allow continued operation of the MCS computer to ensure uninterrupted monitoring until the emergency generator is fully on line.

The 242-A Evaporator is designed to mitigate the effects of failure of a major piece of equipment. In general, the evaporator process can be shut down and the vapor-liquid separator gravity-drained to the feed tank, 241-AW-102, in the event of equipment failure. The process condensate tank, TK-C-100, is designed to overflow to feed tank 241-AW-102. This mitigates failure of the process condensate pump used to transfer the process condensate to LERF.

Response to equipment and power failures are discussed in more detail in the building emergency plan (Appendix 7A).

6.4.5 Personnel Exposure [F-4e]

Facility design, administrative controls, and personal protective equipment are used at the 242-A Evaporator to prevent undue exposure of personnel to mixed waste and other hazardous materials. The following features were incorporated into the 242-A Evaporator design to minimize personnel exposure.

- The facility is designed for remote operation of equipment containing highly radioactive solutions such as waste feed and slurry. These solutions usually are present only in the pump room and evaporator room, which are heavily shielded and routinely are not entered by operating personnel.
- The 242-A Building ventilation system is designed to provide air flow from uncontaminated zones to progressively more contaminated zones.
- Emergency lighting devices are located strategically throughout the 242-A Building.
- Eyewash stations and safety showers are located in rooms containing mixed waste or other hazardous materials that personnel routinely enter. For location of these, refer to the building emergency plan (Appendix 7A).
- Continuous air monitors with audio and/or visual alarms to notify personnel of airborne radioactive contamination are provided in rooms that contain mixed waste and that routinely are entered.
- Methods for decontaminating vessels and equipment are available to reduce personnel exposure if entry for maintenance activity is required.
- Offices, control room, change rooms, and lunchroom are situated to minimize casual exposure of personnel.

All operations are conducted so employee exposure to mixed waste and other hazardous materials are maintained ALARA. Exposures are minimized by engineering or administrative controls with protective gear used where such controls are not practical. Before the start of any operation that might expose personnel to the risk of injury or contamination, a review of the operation is performed to ensure the nature of hazards that might be encountered are considered and that appropriate protective gear is selected. Administrative procedures dictate the level of protective clothing worn and depend on the location within the 242-A Building and the nature of the activity being performed. Personnel are trained to wear personal protective equipment in accordance with approved work procedures.

6.5 PREVENTION OF REACTION OF IGNITABLE, REACTIVE, AND INCOMPATIBLE WASTE [F-5]

The following sections describe prevention of reaction of ignitable, reactive, and incompatible waste.

6.5.1 Precautions to Prevent Ignition or Reaction of Ignitable or Reactive Waste [F-5a]

Administrative procedures are designed to prevent the ignition or reaction of waste at the 242-A Evaporator. The precautions include the following.

- Analysis is performed on candidate waste in the DST System to check that there are no exothermic reactions when the waste is heated and that there will be no adverse affects due to mixing the contents of different waste tanks in the feed tank and evaporator vessel (refer to Chapter 3.0, Appendix 3A for details on waste analysis).
- Sample analysis of the candidate waste in the DST System includes a surface sample to identify the presence of a separable organic phase that might be ignitable. If a separate organic phase is detected, the waste solution level in the feed tank is maintained above 2.54 meters to prevent transfer of the organic phase to the 242-A Evaporator.
- The condensate tank, C-100, is equipped with instrumentation to detect the presence of a separable organic phase. If a separate organic phase is detected, the tank is allowed to overflow, transferring the organic phase to the feed tank, 241-AW-102.
- No smoking is allowed anywhere in the 242-A Building.
- The vapor-liquid separator and the condensate tank are drained before any welding is performed.

6.5.2 Precautions for Handling Ignitable or Reactive Waste and Mixing of Incompatible Waste [F-5b, F-5b(1), and F-5b(2)]

Waste received at the 242-A Evaporator is protected from materials or conditions that might cause the waste to ignite or react. Much of the waste handling is done remotely to reduce the risk to operating personnel. For precautions taken to prevent the ignition or reaction of waste, refer to Section 6.5.1.

The constituents in the waste received at the 242-A Evaporator that are ignitable or reactive are not very volatile. Therefore, the evaporation process renders the waste that is evaporated (i.e., the process condensate) neither ignitable nor reactive.

Table 6-1. Visual Inspection Schedule for Tanks, Piping, and Rooms.

Item	Inspection	Frequency[1]	Responsible organization	Comments
Tank and Piping Inspection				
Condensate tank and piping	Inspect tank and piping for leaks, corrosion, or wear.	Daily	Operations	
Room Inspections				
AMU room	• Inspect tanks and piping for leaks, corrosion, or wear. • Inspect floor for spills or damage. • Inspect for equipment malfunctions. • Inspect for housekeeping/aisle space.	Daily	Operations	
Pump room	• Inspect piping for leaks, corrosion or wear. • Inspect floor for spills or damage. • Inspect for equipment malfunctions. • Inspect for housekeeping. • Inspect pump room sump for overflow.	Daily	Operations	Use viewing window in AMU room to perform inspection.
Loadout and hot equipment storage room	• Inspect piping for leaks, corrosion, or wear. • Inspect sumps and floor for spills or damage. • Inspect for housekeeping/ aisle space.	Daily	Operations	Use viewing window in AMU room to perform inspection.

Table 6-1. Visual Inspection Schedule for Tanks, Piping, and Rooms.

Item	Inspection	Frequency[1]	Responsible organization	Comments
Loading room	• Inspect for housekeeping/ aisle space.	Daily	Operations	Use viewing window in AMU room to perform inspection.
Condenser room	• Inspect tanks and piping for leaks, corrosion, or wear. • Inspect floors for spills or damage. • Inspect for equipment malfunctions. • Inspect for housekeeping/ aisle space.	Daily	Operations	
IX column room	• Inspect piping for leaks, corrosion, or wear. • Inspect floor for spills or damage.	Daily	Operations	Surveillance is required only when mixed waste is present in the column or piping.

[1]Frequencies: Continuously: an operator must be present in the control room to respond to alarms.
Daily: at least every 24 hours.
Weekly: at least every 7 days.
Monthly: at least every 31 days.
Bimonthly: at least every 62 days.
Biannually: at least every 184 days.
Annually: at least every 365 days.

Table 6-2. Inspection Schedule of Safety, Security, and Emergency Equipment.

Item	Inspection	Frequency[1]	Responsible organization	Comments
Security				
Building external doors	Verify external doors are closed and locked.	Daily	Operations	Entrances to office areas are allowed to be unlocked.
Posted warning signs	Verify signs are present, legible, and visible at 7.6 meters.	Weekly	Operations	
Outdoor lighting	Verify outdoor lighting is sufficient.	Weekly	Operations	
Communications				
Crash alarm telephone	Verify crash alarm telephone is operable.	Monthly	Operations	
Emergency sirens	Perform functional check to verify operability.	Monthly	Operations	
Radios	Verify radios are operable and batteries are charged.	Monthly	Operations	
Telephones	Verify telephones are operable.	Quarterly	Operations	
Intercom/public address system	Verify systems are working properly.	Quarterly	Operations	
Emergency Equipment				
Safety showers/ eyewash station	Verify safety showers and eyewash station are operable.	Monthly	Operations	
Emergency lanterns	Verify emergency lanterns are operable.	Monthly	Maintenance	

Table 6-2. Inspection Schedule of Safety, Security, and Emergency Equipment.

Item	Inspection	Frequency[1]	Responsible organization	Comments
Fire extinguishers	Verify fire extinguishers are in their proper location with no signs of tampering.	Monthly	Operations	
Spill response kit	Verify all equipment is present (from checklist in kit) with no signs of tampering.	Monthly	Operations	
Self-contained breathing apparatus (SCBA)	Verify shelf life of SCBA is current, no signs of tampering.	Monthly	Operations	
Personal protective clothing	Verify sufficient stock of clothing is available.	Weekly	Operations	
Full-face respirators	Verify shelf life of respirators are current and sufficient stock is available.	Monthly	Operations	

[1]Frequencies: Continuously: an operator must be present in the control room to respond to alarms.
Daily: at least every 24 hours.
Weekly: at least every 7 days.
Monthly: at least every 31 days.
Bimonthly: at least every 62 days.
Biannually: at least every 184 days.
Annually: at least every 365 days.

Table 6-3. Inspection Schedule for Alarm Monitoring.

Item	Inspection	Frequency[1]	Responsible organization	Comments
Overfill Protection				
Vapor-liquid separator: WFSH-CA11 WFSH-CA12	Monitor for vapor-liquid separator high level.	Continuously	Operations	Surveillance required only when solution is in the vapor-liquid separator.
Leak Detection				
Feed transfer line: LDS-SN269 LDS-SN270	Monitor feed transfer line for leaks.	Continuously	Operations	Surveillance required only during feed line transfers.
Slurry transfer line: LDS-AW-SL	Monitor slurry transfer line for leaks.	Continuously	Operations	Surveillance required only during slurry line transfers.
Cleanout boxes: LDS-COBAW	Monitor cleanout boxes for leaks.	Continuously	Operations	Surveillance required only during slurry or drain line transfers.
Drain lines: LDS-AW-DR	Monitor drain lines for leaks.	Continuously	Operations	Surveillance required only during drain line transfers.
Sampler lines: LDS-SMPL1 LDS-SMPL2	Monitor feed and slurry sampler lines for leaks.	Continuously	Operations	Surveillance required only during feed or slurry sampling.
Pump room sump: WFI-SUMP1	Monitor for leaks in the evaporator room, pump room, loadout and hot equipment storage room and loading room. These rooms drain to the pump room sump.	Continuously	Operations	Surveillance required only when waste solution is present in the rooms listed.

[1]Frequencies: Continuously: an operator must be present in the control room to respond to alarms.
Daily: at least every 24 hours.
Weekly: at least every 7 days.
Monthly: at least every 31 days.
Bimonthly: at least every 62 days.
Biannually: at least every 184 days.
Annually: at least every 365 days.

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Table 6-4. Inspection Schedule for Maintenance and Other Inspections.

Item	Inspection	Frequency[1]	Responsible organization	Comments
Instrumentation Functional Checks and Calibrations				
Leak detectors	Perform leak detector functional checks.	Refer to comment	Maintenance/ Operations	Perform functional checks within 92 days of campaign startup and every 92 days thereafter until the campaign is over.
Vapor-liquid separator high level alarms: WFSH-CA11 WFSH-CA12	Perform calibrations of loop instruments.	Annually	Maintenance	
Pump room sump level: WFI-SUMP1	Perform calibrations of loop instruments.	Annually	Maintenance	
Emergency Electrical Equipment				
Diesel generator	Verify operability.	Monthly	Maintenance	
Uninterruptible power supply	Verify output voltage and inspect battery for signs of damage or tampering.	Annually	Maintenance	
Cathodic Protection				
Rectifiers	Check rectifiers for leaks, murky oil, signs of damage, or component degradation.	Bimonthly (62 days)	Maintenance	
System operation	Verify operation meets NACE requirements.	Annually	Maintenance	

Table 6-4. Inspection Schedule for Maintenance and Other Inspections.

Item	Inspection	Frequency[1]	Responsible organization	Comments
Fire Systems				
Smoke detectors	Verify operability	Annually	Hanford Fire Department	
Pull stations	Verify operability	Annually	Hanford Fire Department	
Fire extinguishers	Verify that pressure is within proper range and verify unimpaired physical condition.	Annually	Hanford Fire Department	Refer to Table 6-2 for monthly inspection.
Fire hydrant	Check that hydrant is operational.	Biannually (182 days)	Hanford Fire Department	
Fire inspection	Walk down to check for fire extinguishers, access control, labeling, fire lanes, fire hydrants, etc.	Annually	Hanford Fire Department	Hanford Fire Department Checklist is used for the inspection.
Other Inspections				
Integrity assessment	Check integrity of vapor-liquid separator and condensate tank per IAR.	Refer to comment	Operations	The requirements and frequencies for integrity testing are given in the IAR (Appendix 4C).

[1]Frequencies: Continuously: an operator must be present in the control room to respond to alarms.
Daily: at least every 24 hours.
Weekly: at least every 7 days.
Monthly: at least every 31 days.
Bimonthly: at least every 62 days.
Biannually: at least every 184 days.
Annually: at least every 365 days.

IAR = initial integrity assessment.
NACE = National Association of Corrosion Engineers.

CONTENTS

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9.0 EXPOSURE INFORMATION REPORT

The 242-A Evaporator does not store, treat, or dispose of dangerous or mixed waste in a surface impoundment or landfill as defined in 40 CFR 270.10 and RCRA, Section 3019. Therefore, exposure information is not required.

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CONTENTS

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10.0 WASTE MINIMIZATION

To fulfill the requirements of 40 CFR 264.73(b)(9), a certification form that the 242-A Evaporator has a waste minimization/pollution prevention program in place will be entered annually into the 242-A Evaporator operating record.

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CONTENTS

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12.0 REPORTING AND RECORDKEEPING

Reporting and recordkeeping requirements that could be applicable to the Hanford Facility are described in Chapter 12.0 of the General Information Portion (DOE/RL-91-28). Not all of these requirements and associated reports and records identified in Chapter 12.0 of the General Information Portion are applicable to the 242-A Evaporator. Those reporting and recordkeeping requirements determined to be applicable to the 242-A Evaporator are summarized as follows:

- Hanford Facility Contingency Plan and incident records (as identified in the General Information Portion):
  - Immediate reporting
  - Written reporting.
- Unit-specific Part B permit application documentation and associated plans
- Personnel training records
- Inspection records (unit)
- Land disposal restriction records
- Waste minimization and pollution prevention.

In addition, the following reports prepared for the Hanford Facility will contain input, when appropriate, from the 242-A Evaporator:

- Quarterly Hanford Facility RCRA Permit modification report
- Anticipated noncompliance
- Required annual reports.

Annual reports updating projections of anticipated costs for closure and postclosure will be submitted when the 242-A Evaporator closure plan is submitted to Ecology (Chapter 11.0).

The 242-A Evaporator Operating Record 'records contact' is kept on file in the General Information file of the Hanford Facility Operating Record (refer to DOE/RL-91-28, Chapter 12.0).

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CONTENTS

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13.0 OTHER FEDERAL AND STATE LAWS [J]

Applicable federal, state, and local laws applicable to the 242-A Evaporator are discussed in Chapter 13.0 of the General Information Portion (DOE/RL-91-28). Generally, the laws applicable to the 242-A Evaporator include, but might not be limited to, the following:

Atomic Energy Act of 1954
Federal Facility Compliance Act of 1992
Clean Air Act of 1977
Safe Drinking Water Act of 1974
Emergency Planning and Community Right-to-Know Act of 1986
Toxic Substances Control Act of 1976
National Historic Preservation Act of 1966
Endangered Species Act of 1973
Fish and Wildlife Coordination Act of 1934
Federal Insecticide, Fungicide, and Rodenticide Act of 1975
Hazardous Materials Transportation Act of 1975
National Environmental Policy Act of 1969
Washington Clean Air Act of 1967
Washington Water Pollution Control Act of 1945
Washington Pesticide Control Act of 1971
New Source Construction Permits
Model Toxics Control Act
Benton Clean Air Authority Regulation 1
State Environmental Policy Act of 1971.

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CONTENTS

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15.0 REFERENCES

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DOE-RL, 1996, *Radionuclide Air Emissions Report for the Hanford Site - Calendar Year 1995*, DOE/RL-96-37, Rev. 0, U.S. Department of Energy Richland Operations Office, Richland, Washington.

DOE/RL-96-63, *Annual Hanford Site Environmental Permitting Status Report*, Rev. 0, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE/RL-97-03, *Hanford Facility Dangerous Waste Permit Application, Liquid Effluent Retention Facility and 200 Area Effluent Treatment Facility*, U.S. Department of Energy Richland Operations Office, Richland, Washington.

Ecology, 1987, *State of Washington Part B Permit Application Requirements*, Washington State Department of Ecology, Olympia, Washington.

Ecology, 1993, Letter, *242-A Evaporator Restart*, G. Anderson, Washington State Department of Ecology, to J. D. Bauer, U.S. Department of Energy.

Ecology, 1994, *Guidance for Clean Closure of Dangerous Waste Facilities*, Washington State Department of Ecology, Olympia, Washington.

Ecology, 1996, *Dangerous Waste Permit Application Requirements*, #95-402, Washington State Department of Ecology, Olympia, Washington.

NFPA, 1996, National Fire Protection Association Code 30, *Flammable and Combustible Liquids Code*, NFPA-30, updated periodically.

Vitro, 1974, *Construction Specification for 242-A Evaporator-Crystallizer Facilities Project B-100*, B-100-C1, Automated Industries, Vitro Engineering Division, Richland, Washington.

WHC, 1990a, *242-A Evaporator Cooling Water Stream Specific Report*, Addendum 21, WHC-EP-0342-21, Rev. 0, Westinghouse Hanford Company, Richland, Washington.

WHC, 1990b, *242-A Evaporator Steam Condensate Stream Specific Report*, Addendum 26, WHC-EP-0342-26, Rev. 0, Westinghouse Hanford Company, Richland, Washington.

WHC, 1994a, *Characterization of Double Shell Tank for Evaporator 242 Project - Tank 241-AP-101*, WHC-SD-WM-DP-051, Rev. 0 (with Addenda), Westinghouse Hanford Company, Richland, Washington.

WHC, 1994b, *Characterization of Double Shell Tank for Evaporator 242 Project - Tank 241-AP-107*, WHC-SD-WM-DP-053, Rev. 0 (with Addenda), Westinghouse Hanford Company, Richland, Washington.

WHC, 1994c, *222-S Characterization of 242-A Evaporator Slurry, Campaign 94-1*, WHC-SD-WM-DP-067, Rev. 0, Westinghouse Hanford Company, Richland, Washington.

WHC, 1994d, *Data Validation Report for 242A Evaporator Process Condensate*, three reports: SDG W0054-ITC-070, SDG W0069-ITC-078, SDG W0090-ITC-090, Westinghouse Hanford Company, Richland, Washington.

WHC, 1995a, *Data Quality Objectives for Tank Farms Waste Compatibility Program*, WHC-SD-WM-DQO-001, Rev. 1, Westinghouse Hanford Company, Richland, Washington.

WHC, 1996, *Organic Emission Calculations for 242-A Evaporator Vessel Vent System*, WHC-SD-WM-ES-380, Rev. 0, Westinghouse Hanford Company, Richland, Washington.

APPENDICES

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APPENDIX 4A

ENGINEERING DRAWINGS

ENGINEERING DRAWINGS

CONTENTS

The drawings in Table 4A-1 are process and instrumentation diagrams for the systems at the 242-A Evaporator that contact mixed waste. These drawings are provided for general information and to demonstrate the adequacy of the design of the tank systems. An update to these drawings will be provided annually to the Washington State Department of Ecology.

Table 4A-1. Process and Instrumentation Diagrams.

System	Drawing Number	Outstanding ECNs	Drawing Title
Vapor-Liquid Separator	H-2-98988 Sh. 1, Rev. 7	None	P & ID Evap Recirc System
Reboiler/Recirculation Line	H-2-98988 Sh. 2, Rev. 5	None	P & ID Evap Recirc System
Slurry System	H-2-98989 Sh. 1,Rev. 10	ECN-662012	P & ID Slurry System
Condensate Collection Tank	H-2-98990 Sh. 1,Rev. 10	None	P & ID Process Condensate System
Secondary Containment Drain System	H-2-98995 Sh. 1, Rev. 11	ECN-664301	P & ID Drain System
Secondary Containment Drain System	H-2-98995 Sh. 2, Rev. 5	None	P & ID Drain System
Condensers	H-2-98999 Sh. 1, Rev. 11	None	P & ID Vacuum Condenser System
Pump Room Sump	H-2-99002 Sh. 1, Rev. 5	ECN-647885	P & ID Jet Gang Valve System
Condensate Recycle System	H-2-99003 Sh. 1, Rev. 12	None	P & ID Filtered Raw Water System

ECN - engineering change notice.
P & ID - piping and instrumentation diagram.

The drawings in Table 4A-2 are for secondary containment systems for the 242-A Evaporator. Because secondary containment systems are the final barrier for preventing the release of dangerous waste into the environment, ECNs that affect the secondary containment systems will be submitted to the Washington State Department of Ecology, as a Class 1, 2, or 3 permit modification, as required by WAC 173-303-830.

Table 4A-2. Drawing of 242-A Evaporator Secondary Containment Systems.

System	Drawing Number	Outstanding ECNs	Drawing Title
242-A Building	H-2-69277 Sh 1, Rev 2	None	Structural Foundation Plan Sections & General Notes - Areas 1 & 2
	H-2-69278 Sh 1, Rev 3	None	Structural Foundation Elevations & Details - Areas 1 & 2
	H-2-69279 Sh 1, Rev 3	None	Structural First Floor Plan & AMU - Areas 1 & 2
Pump Room Sump Drainage	H-2-69352 Sh 1, Rev 4	ECN-121216 ECN-121238 ECN-194242 ECN-610629 ECN-620353	Sections Process Waste Drainage
242-A Building Drainage	H-2-69354 Sh 1, Rev 4	ECN-194242 ECN-610629 ECN-620353	Plan Process Waste Drainage
Pump Room Sump	H-2-69369 Sh 1, Rev 1	None	Pump Room Sump Assembly & Details

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APPENDIX 4A

ENGINEERING DRAWINGS

Outstanding ECNs

S

ENGINEERING CHANGE NOTICE ESSENTIAL

Page 1 of 8

1. ECN 662012

Proj. ECN

CPF 134, 13B

2. ECN Category (mark one)	3. Originator's Name, Organization, MSIN, and Telephone No.	4. USQ Required?	5. Date
Supplemental [X] Direct Revision [] Change ECN [] Temporary [] Standby [] Supersedure [] Cancel/Void []	MC TEATS, 3M500, S6-72, 373-4655	[] Yes [X] No	12/15/00
	6. Project Title/No./Work Order No. LWPF / 101697 / AJ60 ADD LOW-LOW SLURRY FLOW INTERLOCK	7. Bldg./Sys./Fac.No. 242A / A21	8. Approval Designator T
	9. Document Numbers Changed by this ECN (includes sheet no. and rev.) SEE BLOCK 13A	10. Related ECN No(s). N/A	11. Related PO No. N/A

12a. Modification Work	12b. Work Package No.	12c. Modification Work Complete	12c. Restored to Original Condition (Temp. or Standby ECN only)
[X] Yes (fill out Blk. 12b) [] No (NA Blks. 12b, 12c, 12d)	EL-00-00383/M WCN #004	Design Authority/Cog. Engineer Signature & Date	N/A Design Authority/Cog. Engineer Signature & Date

13a. Description of Change

13b. Design Baseline Document? [x] Yes [] No

MODIFY FOLLOWING ESSENTIAL DRAWINGS:
1) H-2-99949 SHEET 13, REV 1: ADD LOGIC HAND SWITCH HS-SLF-SP TO SELECT LOW FLOW SETPOINT PER PAGE 3 THIS ECN.
2) H-2-99949 SHEET 14, REV 0, IS: MODIFY LOGIC FOR LOW FLOW SETPOINT SELECTION PER PAGE 4 THIS ECN.
3) H-2-99949 SHEET 14, REV 0, WAS: PER PAGE 5 THIS ECN.
4) H-2-98989 SHEET 1, REV 10, ZN E3-F3, IS: ADD HAND SWITCH TO P&ID PER PAGE 6 THIS ECN.
5) H-2-98989 SHEET 1, REV 10, ZN F5: ADD ALARM INDICATION TO P&ID PER PAGE 7 THIS ECN.

MODIFY FOLLOWING SUPPORTING DOCUMENT:
1) HNF-SD-534-SWD-001, REV 6: ADD ALARM AND INTERLOCK SETPOINTS PER PAGE 8 THIS ECN.

NO USQ REQUIRED PER CATEGORICAL EXCLUSION LW-98-023.

14a. Justification (mark one)

Criteria Change	[X]	Design Improvement	[]	Environmental	[]	Facility Deactivation	[]
As-Found	[]	Facilitate Const	[]	Const Error/Omission	[]	Design Error/Omission	[]

14b. Justification Details

PROVIDES OPTIONAL SLURRY LOW-LOW FLOW SETPOINT OF 33 GPM FOR PRODUCTION OF DILUTE SLURRY. THIS IS INTENDED TO 1) PERMIT GREATER WASTE VOLUME REDUCTION IN SOME CAMPAIGNS, AND 2) IMPROVE PROCESS CONTROL BY ALLOWING CONTINUOUS SLURRY FLOW IN SUCH CAMPAIGNS INSTEAD OF BATCH SLURRY FLOW, THEREBY PERMITTING STEADY-STATE OPERATION RATHER THAN OSCILLATING OPERATION.

Software changes are under a NEPA site wide categorical exclusion B1.3.

15. Distribution (include name, MSIN, and no. of copies)

JB BENTON	S6-72	1	MW BOWMAN	S6-72	1	JL FOSTER	S6-74	1
DL FLYCKT	S6-71	1	EQ LE	S6-72	1*	EA MCNAMAR	S6-72	1*
CD SKOGLEY	S6-71	1	DK SMITH	S6-71	1	NJ SULLIVAN	S6-72	1
MC TEATS	S6-72	1*	CM TOWNE	S6-74	1	RW SZELMECZKA	S6-72	1
AJ GREEN	B4-39	1*	BA MESSINGER	B4-39	1*	JM ISDELL	B4-39	1*

*ADVANCED COPIES (1)

RELEASE STAMP
DATE: JAN 25 2001
STA: 30
HANFORD RELEASE ID: 25

A-7900-013-2 (05/96) GEF095

A-7900-013-1

ENGINEERING CHANGE NOTICE CONTINUATION SHEET		1. ECN (use no. from pg. 1)
	Page 2 of 8	662012

16. Design Verification Required	17. Cost Impact ENGINEERING		CONSTRUCTION		18. Schedule Impact (days)	
[X] Yes	Additional	[NA] $	Additional	[NA] $	Improvement	[NA]
[ ] No	Savings	[NA] $	Savings	[NA] $	Delay	[NA]

19. Change Impact Review: Indicate the related documents(other than the engineering documents identified on Side 1)that will be affected by the change described in Block 13. Enter the affected document number in Block 20.

SDD/DD	[ ]	Seismic/Stress Analysis	[ ]	Tank Calibration Manual	[ ]
Functional Design Criteria	[ ]	Stress/Design Report	[ ]	Health Physics Procedure	[ ]
Operating Specification	[ ]	Interface Control Drawing	[ ]	Spares Multiple Unit Listing	[ ]
Criticality Specification	[ ]	Calibration Procedure	[ ]	Test Procedures/Specification	[ ]
Conceptual Design Report	[ ]	Installation Procedure	[ ]	Component Index	[ ]
Equipment Spec.	[ ]	Maintenance Procedure	[ ]	ASME Coded Item	[ ]
Const. Spec.	[ ]	Engineering Procedure	[ ]	Human Factor Consideration	[ ]
Procurement Spec.	[ ]	Operating Instruction	[ ]	Computer Software	[ ]
Vendor Information	[ ]	Operating Procedure	[X]	Electric Circuit Schedule	[ ]
OM Manual	[ ]	Operational Safety Requirement	[ ]	ICRS Procedure	[ ]
FSAR/SAR	[ ]	IEFD Drawing	[ ]	Process Control Manual/Plan	[ ]
Safety Equipment List	[ ]	Cell Arrangement Drawing	[ ]	Process Flow Chart	[ ]
Radiation Work Permit	[ ]	Essential Material Specification	[ ]	Purchase Requisition	[ ]
Environmental Impact Statement	[ ]	Fac. Proc. Samp. Schedule	[ ]	Tickler File	[ ]
Environmental Report	[ ]	Inspection Plan	[ ]	Set Value Selection Basis	[ ]
Environmental Permit	[ ]	Inventory Adjustment Request	[ ]	None	[ ]

20. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

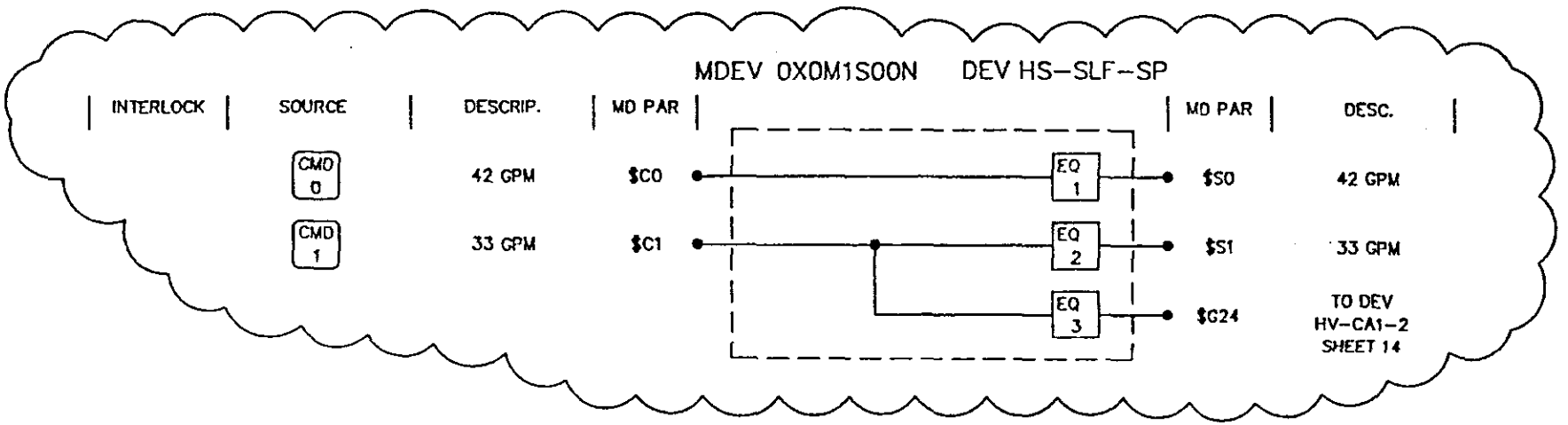
Document Number/Revision	Document Number/Revision	Document Number Revision
ARP-T-601-015 / E-1	TO-600-030 / L-7	TO-600-035 / B-2
TO-600-060 / K-2	TO-600-065 / E-1	TO-600-080 / G-2

21. Approvals

Signature	Date	Signature	Date
Design Authority MC TEATS MC Teats	12/15/00	Design Agent MC TEATS MC Teats	12/15/00
Cog. Eng. EA MCNAMAR E.A. McNamar	12/19/00	PE	
Cog. Mgr. NJ SULLIVAN N.J. Sullivan	12-19-00	QA	
QA		Safety	
Safety		Design	
Environ.		Environ.	
Other OPS		Other	
INFORMAL REVIEW JB BENTON J.B. Benton	12/19/00		
		DEPARTMENT OF ENERGY	
		Signature or a Control Number that tracks the Approval Signature	
		ADDITIONAL	

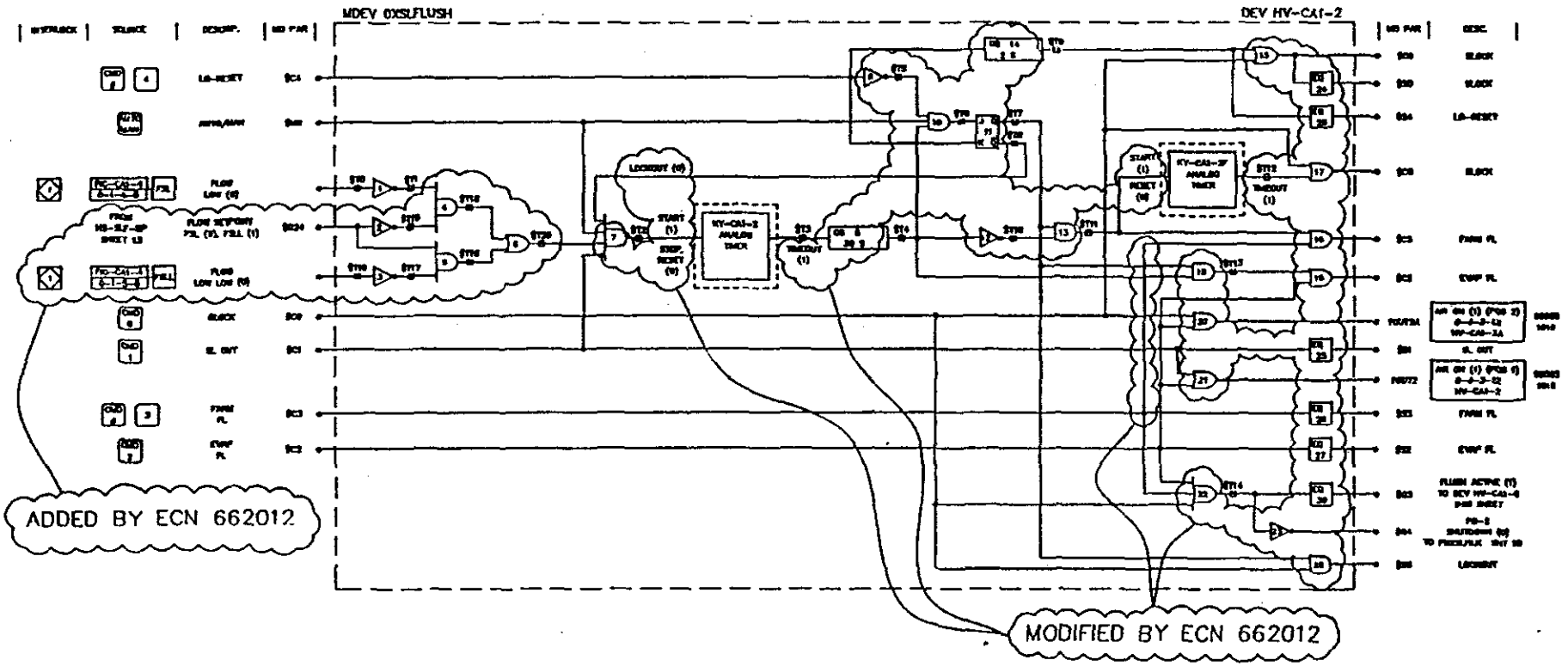
ENGINEERING CHANGE NOTICE CONTINUATION SHEET		ECN 662012
	Page 3 /8	Date 12-15-00

H-2-99949, SHEET 13, REV 1 (ESSENTIAL DRAWING)
ZONES B2-B4, ADD FOLLOWING DEV HS-SLF-SP:



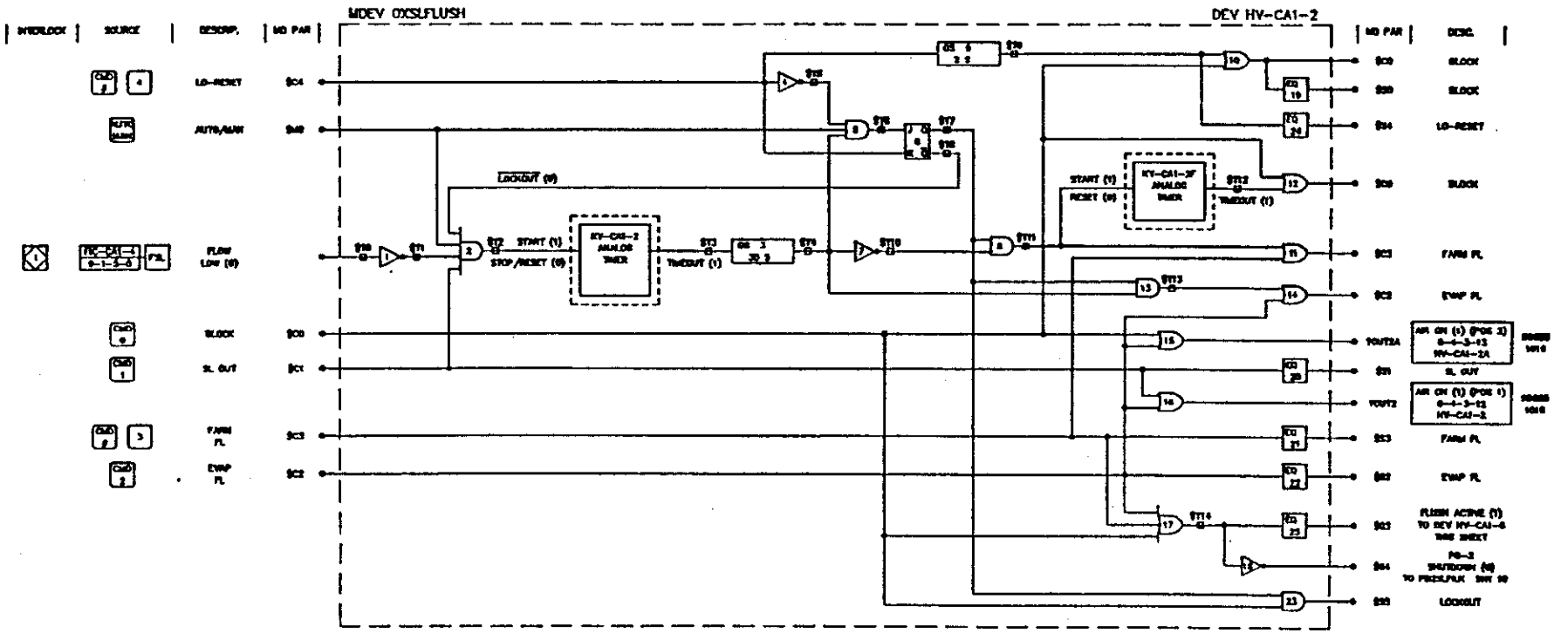
ENGINEERING CHANGE NOTICE CONTINUATION SHEET		ECN 662012
	Page 4 / 8	Date 12-15-00

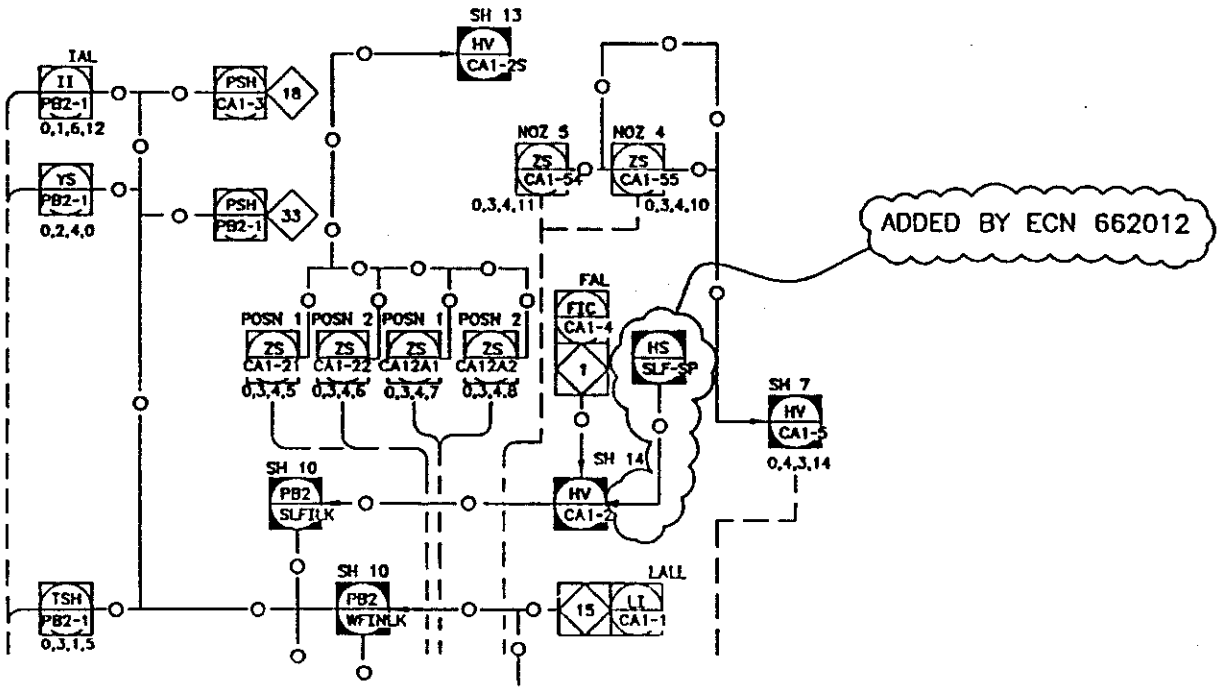
H-2-99949, SHEET 14, REV 0 (ESSENTIAL DRAWING)
ZONES C1-F8, MODIFY DEV HV-CA1-2 AS FOLLOWS (IS):



ENGINEERING CHANGE NOTICE CONTINUATION SHEET		ECN 662012
	Page 5 / 8	Date 12-15-00

H-2-99949, SHEET 14, REV 0 (ESSENTIAL DRAWING)
ZONES C2-F8, DEV HV-CA1-2 WAS:

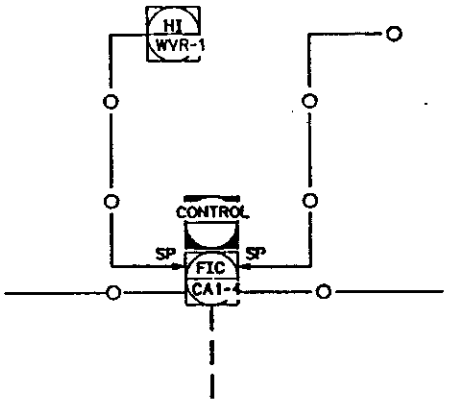




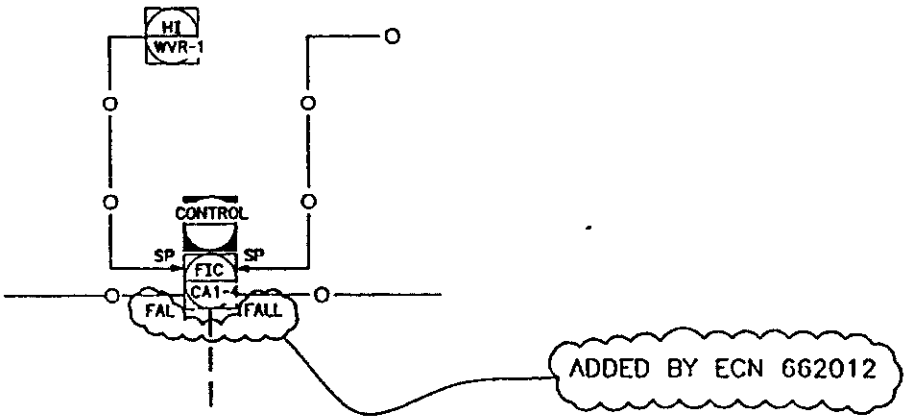
H-2-98989, SHEET 1, REV 10 (ESSENTIAL DRAWING)
ZONES E3-F3, SHOULD BE CONDITION

ENGINEERING CHANGE NOTICE CONTINUATION SHEET		ECN 662012
	Page 7/8	Date 12-15-00

H-2-98989, SHEET 1, REV 10 (ESSENTIAL DRAWING)
ZONE F5, WAS:



H-2-98989, SHEET 1, REV 10 (ESSENTIAL DRAWING)
ZONE F5, IS:



HNF-SD-534-SWD-001 REV 6, APPENDIX A & C WAS:

PCM	MUX	BD	PT	SIG TYPE	MCS EPN	FACEPLATE DESCRIPTOR (SEE NOTE 23)	RANGE	ENG UNIT	DIGITAL ALARMS		ANALOG WHITE STATUS	ANALOG YELLOW ALARMS	ANALOG RED ALARMS	LIM BLOCK (NOTE 18)		DEAD BAND	SEE NOTE
									COLOR	STAT				LOSET	HISET		
0	1	5	5	AI2	FIC-CA1-4	EVAP SLURRY FLOW	0-100	GPM	NA	NA	NA	42L	NA	-	43	1	38

EFFECTED AREA

HNF-SD-534-SWD-001 REV 6, APPENDIX A & C IS:

PCM	MUX	BD	PT	SIG TYPE	MCS EPN	FACEPLATE DESCRIPTOR (SEE NOTE 23)	RANGE	ENG UNIT	DIGITAL ALARMS		ANALOG WHITE STATUS	ANALOG YELLOW ALARMS	ANALOG RED ALARMS	LIM BLOCK (NOTE 18)		DEAD BAND	SEE NOTE
									COLOR	STAT				LOSET	HISET		
0	1	5	5	AI2	FIC-CA1-4	EVAP SLURRY FLOW	0-100	GPM	NA	NA	NA	33LL,42L	NA	-	34, 43	1	38

CHANGE TO

S

ENGINEERING CHANGE NOTICE

ESSENTIAL

CPF 13A, 13B

Page 1 of 5

1. ECN 664301

Proj. ECN

2. ECN Category (mark one)	3. Originator's Name, Organization, MSIN, and Telephone No.	4. USQ Required?	5. Date
Supplemental ☒ Direct Revision ☐ Change ECN ☐ Temporary ☐ Standby ☐ Supersedure ☐ Cancel/Void ☐	E. A. McNamar, 3M500, S6-72, 373-4661	☒ Yes ☐ No LW-01-007	2/5/01
	6. Project Title/No./Work Order No. LWPF/101697/AJ00/Add Sample Valves at 242-A	7. Bldg./Sys./Fac. No. 242-A/A03/A12	8. Approval Designator T
	9. Document Numbers Changed by this ECN (includes sheet no. and rev.) See Block 13a	10. Related ECN No(s). N/A	11. Related PO No. N/A

12a. Modification Work	12b. Work Package No.	12c. Modification Work Completed	12d. Restored to Original Condition (Temp. or Standby ECNs only)
☒ Yes (fill out Blk. 12b) ☐ No (NA Blks. 12b, 12c, 12d)	EL-01-00073/M	Design Authority/Cog. Engineer Signature & Date	N/A Design Authority/Cog. Engineer Signature & Date

13a. Description of Change

13b. Design Baseline Document? ☒ Yes ☐ No

H-2-98994, Sheet 1, Rev. 10
H-2-98995, Sheet 1, Rev. 11

Stainless steel needle valve is added downstream of existing 1/2" bronze valve 1-26 as shown on page 4 of this ECN. New needle valve will be numbered 1-26 and bronze valve will be renumbered 1-26A.

Stainless steel needle valve is added downstream of existing 1/2" bronze valve 2-20 as shown on page 5 of this ECN. New needle valve will be numbered 2-20 and bronze valve will be renumbered 2-23.

Piping, fittings, and jointing methods are to meet the requirements of the Hanford M-31 Piping Material Code (H-2-31750, sheet 31, rev. 5). Install, inspect and test the new piping installation in accordance with ASME B31.1 and Addenda.

14a. Justification (mark one)	14b. Justification Details
Criteria Change ☐ Design Improvement ☒ Environmental ☐ Facility Deactivation ☐ As-Found ☐ Facilitate Const. ☐ Const. Error/Omission ☐ Design Error/Omission ☐	Addition of needle valves will improve flow control when obtaining samples.

15. Distribution (include name, MSIN, and no. of copies)

MC Teats	S6-72	1	MW Bowman	S6-72	1
WCC Planning	S6-72	1*	EQ Le	S6-72	1
NJ Sullivan	S6-71	1			
DL Flyckt	S6-71	1			
EA McNamar	S6-72	1*			
JM Isdell	B4-39	1*			
CD Skogley	S6-71	1			
RW Szelmeczka	S6-72	1			
JL Foster	S6-74	1			

RELEASE STAMP

FEB 06 2001

DATE:

STA: 30

HANFORD RELEASE

ID: 9

ENGINEERING CHANGE NOTICE

1. ECN (use no. from pg. 1): 664301

16. Design Verification Required	17. Cost Impact		18. Schedule Impact (days)
	ENGINEERING	CONSTRUCTION	
☒ Yes	Additional ☐ $ N/A	Additional ☐ $ N/A	Improvement ☐ N/A
☐ No	Savings ☐ $ N/A	Savings ☐ $ N/A	Delay ☐ N/A

19. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 13. Enter the affected document number in Block 20.

SDD/DD	☐	Seismic/Stress Analysis	☐	Tank Calibration Manual	☐
Functional Design Criteria	☐	Stress/Design Report	☐	Health Physics Procedure	☐
Operating Specification	☐	Interface Control Drawing	☐	Spares Multiple Unit Listing	☐
Criticality Specification	☐	Calibration Procedure	☐	Test Procedures/Specification	☐
Conceptual Design Report	☐	Installation Procedure	☐	Component Index	☐
Equipment Spec.	☐	Maintenance Procedure	☐	ASME Coded Item	☐
Const. Spec.	☐	Engineering Procedure	☐	Human Factor Consideration	☐
Procurement Spec.	☐	Operating Instruction	☐	Computer Software	☐
Vendor Information	☐	Operating Procedure	☒	Electric Circuit Schedule	☐
OM Manual	☐	Operational Safety Requirement	☐	ICRS Procedure	☐
FSAR/SAR	☐	IEFD Drawing	☒	Process Control Manual/Plan	☐
Safety Equipment List	☐	Cell Arrangement Drawing	☐	Process Flow Chart	☐
Radiation Work Permit	☐	Essential Material Specification	☐	Purchase Requisition	☐
Environmental Impact Statement	☐	Fac. Proc. Samp. Schedule	☐	Tickler File	☐
Environmental Report	☐	Inspection Plan	☐	_____	☐
Environmental Permit	☐	Inventory Adjustment Request	☐	_____	☐

20. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

Document Number/Revision	Document Number/Revision	Document Number/Revision
TO-600-010, Rev. N-0		

21. Approvals

	Signature	Date		Signature	Date
Design Authority	E. A. McNamar E.A.McNamar	2-1-01	Design Agent	E. A. McNamar E.A.McNamar	2-1-01
Cog. Eng.	E. A. McNamar E.A.McNamar	2-1-01	PE		
Cog. Mgr.	N. J. Sullivan	2-5-01	QA		
QA			Safety		
Safety			Design		
Environ.			Environ.		
Other			Other		
Independent Review MC Teats	MC Teats	2/5/01			

DEPARTMENT OF ENERGY

Signature or a Control Number that tracks the Approval Signature

ADDITIONAL

ECN664301
Page 3 of 5

Hanford NEPA Screening Form

For NEPA requirements, see HNF-PRO-452
Answer questions YES or NO, and list NUMBER if applicable.

Work Item Title: Add Sample Valves at 242-A

Work Package Number: EL | 01 | 00073 | M

Project Description: (please limit to 6 lines)

Add sample valves downstreama of existing valves 2-20 (used raw water) and 1-26 (process condensate).

A INTEGRAL ELEMENTS

Will work threaten to violate environmental laws, regulations, permits, or safety requirements? ○ Yes ◉ No

Will work involve construction/expansion of waste treatment, storage, disposal facilities? ○ Yes ◉ No

Will hazardous substances be disturbed allowing uncontrolled/unpermitted releases? ○ Yes ◉ No

go to B

B ECOLOGICAL RESOURCES

Will work affect Wetlands/Aquifers/ALE Reserve? ○ Yes ◉ No

Will work occur within 1/4 mile of Columbia River (Hanford Reach National Monument)? ○ Yes ◉ No

Will wildlife or natural habitat be disturbed? ○ Yes ◉ No

If all answers are NO, go to C; If any answer is YES, get Ecological Review. NUMBER: _____ then go to E.

C CULTURAL RESOURCES

Does the work require excavations or surface disturbing activities? Obtain permit if required. ○ Yes ◉ No

Does the work require building or equipment modifications to listed historic structures? ○ Yes ◉ No

If all answers are NO, and all conditions have been met and the SWCX applies, go to D; If any answer is YES, a Cultural Resources Review is required.

List review NUMBER: _____ NOTE: If adverse impacts are identified, go to E.

D SITE-WIDE CATEGORICAL EXCLUSION (SWCX)

In evaluating potential environmental impacts, was Waste Minimization considered? See HNF-PRO-462. ○ Yes ◉ No

Is the work covered by a SWCX? ◉ Yes ○ No

If YES, list SWCX that applies: B1.3 Routine Maintenance; print form and sign; if NO, go to E

E SITE-WIDE CX DOES NOT APPLY

Does other DOE approved NEPA documentation apply for this activity? If yes provide applicable document number ○ Yes ○ No

DOE/EA- _____ DOE/EIS- _____ Other- _____

If CX or EA preparation may be needed, contact FH ES 376-4373.

Signature

SWCX is not valid until any applicable Cultural/Ecological Resource Reviews are received and attached to this form.

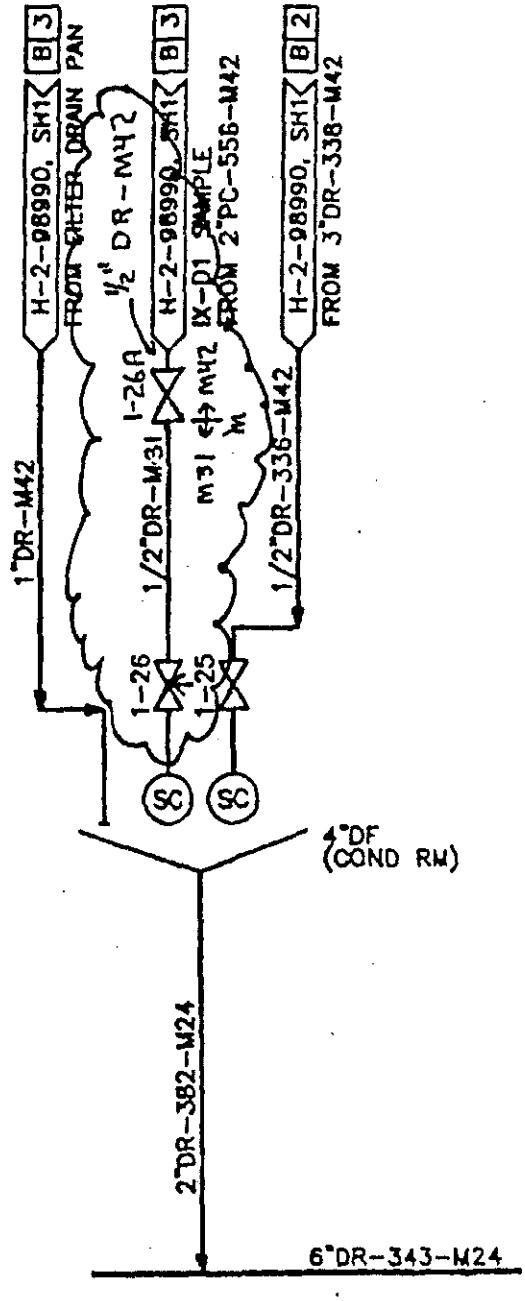
Reviewer: E. R. Mahaman Phone: 373-4661
(Initiator, Cog. Engineer, Scheduler, Planner)

Concurrence: M. J. Boarman Date: 7-31-01
(Manager, Env. Compliance Officer, FH ES)

SWCX cannot be used if the action is part of an activity under review in an EA/EIS. MAINTAIN A COPY IN THE APPLICABLE PROJECT FILE OR WORK PACKAGE

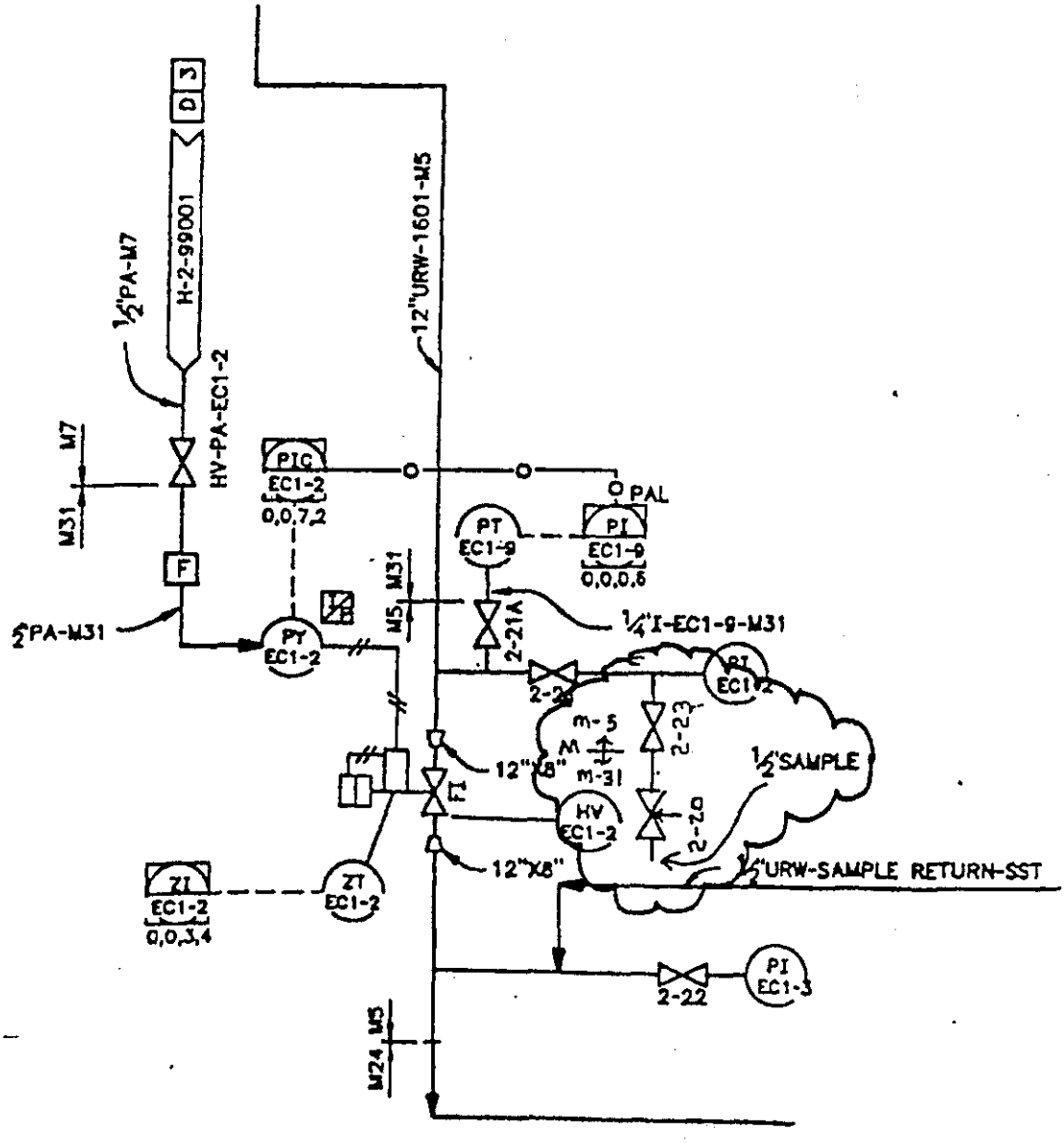
A-6001-497 (11/00)

ON H-2-98995, SH 1, REV. 11, ZONE C/D-2, MODIFY SAMPLE VALVING AS SHOWN IN CLOUDED AREA, BELOW:



ENGINEERING CHANGE NOTICE CONTINUATION SHEET	Page 5 of 5	ECN 664301
		Date 2/5/01

ON H-2-98994, SH 1, REV. 10, ZONE B-7, MODIFY SAMPLE VALVING AS SHOWN IN CLOUDED AREA, BELOW:



S

ENGINEERING CHANGE NOTICE ESSENTIAL

Page 1 of 7

CPF 13A, 13B

1. ECN 647885

Proj. ECN

2. ECN Category (mark one)	3. Originator's Name, Organization, MSIN, and Telephone No.	4. USQ Required?	5. Date
Supplemental [X] Direct Revision [] Change ECN [] Temporary [] Standby [] Supersedure [] Cancel/Void []	TM GALIOTO, 32230, S6-72, 373-4894	[X] Yes [] No LW-98-026	06-15-98
	6. Project Title/No./Work Order No. PT-CA1-5 UPDATE	7. Bldg./Sys./Fac. No. 242A/200E	8. Approval Designator NA
	9. Document Numbers Changed by this ECN (includes sheet no. and rev.) SEE BLOCK 13A	10. Related ECN No(s). NA	11. Related PO No. NA

12a. Modification Work	12b. Work Package No.	12c. Modification Work Complete	12d. Restored to Original Condition (Temp. or Standby ECN only)
[X] Yes (fill out Blk. 12b) [] No (NA Blks. 12b, 12c, 12d)	EL-97-00531	Design Authority/Cog. Engineer Signature & Date	NA Design Authority/Cog. Engineer Signature & Date

13a. Description of Change
H-2-99002 SH1 REV 5
SEE PAGE 4 THIS ECN

13b. Design Baseline Document? [X] Yes [] No

14a. Justification (mark one)

Criteria Change	[X]	Design Improvement	[]	Environmental	[]	Facility Deactivation	[]
As-Found	[]	Facilitate Const	[]	Const. Error/Omission	[]	Design Error/Omission	[]

14b. Justification Details
The pressure transmitter is no longer used or required. It is being physically removed from service. The lines to and from the pressure transmitter will be capped.

15. Distribution (include name, MSIN, and no. of copies)

TM GALIOTO	S6-72*	RF WEIS	S6-71
NJ SULLIVAN	S6-72	RS WEBER	S6-71
JE GEARY	S6-71	* = ADVANCED COPY	
J ISDELL	S6-17*	*WCC PLANNING	S6-72
MW BOWMAN	S6-72		
DL FLYCKT	S6-71		

RELEASE STAMP
JUN 30 1998
DATE:
HANFORD RELEASE
STA: 30
ID: 25

A-7900-013-2 (05/96) GEF095

A-7900-013-1

ENGINEERING CHANGE NOTICE	Page 2 of 7	1. ECN (use no. from pg. 1) 647885

16. Design Verification Required	17. Cost Impact				18. Schedule Impact (days)	
	ENGINEERING		CONSTRUCTION			
[X] Yes	Additional	[] $	Additional	[] $	Improvement	[]
[] No	Savings	[] $NA	Savings	[] $NA	Delay	[] NA

19. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 13. Enter the affected document number in Block 20.

SDD/DD	[]	Seismic/Stress Analysis	[]	Tank Calibration Manual	[]
Functional Design Criteria	[]	Stress/Design Report	[]	Health Physics Procedure	[]
Operating Specification	[]	Interface Control Drawing	[]	Spares Multiple Unit Listing	[]
Criticality Specification	[]	Calibration Procedure	[]	Test Procedures/Specification	[]
Conceptual Design Report	[]	Installation Procedure	[]	Component Index	[X]
Equipment Spec.	[]	Maintenance Procedure	[]	ASME Coded Item	[]
Const. Spec.	[]	Engineering Procedure	[]	Human Factor Consideration	[]
Procurement Spec.	[]	Operating Instruction	[]	Computer Software	[]
Vendor Information	[]	Operating Procedure	[X]	Electric Circuit Schedule	[]
OM Manual	[]	Operational Safety Requirement	[]	ICRS Procedure	[]
FSAR/SAR	[]	IEFD Drawing	[]	Process Control Manual/Plan	[]
Safety Equipment List	[]	Cell Arrangement Drawing	[]	Process Flow Chart	[]
Radiation Work Permit	[]	Essential Material Specification	[]	Purchase Requisition	[]
Environmental Impact Statement	[]	Fac. Proc. Samp. Schedule	[]	Tickler File	[]
Environmental Report	[]	Inspection Plan	[]	None	[]
Environmental Permit	[]	Inventory Adjustment Request	[]		[]

20. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

Document Number/Revision	Document Number/Revision	Document Number Revision
TD-6000-010		
EE-01553		

21. Approvals

	Signature	Date		Signature	Date
Design Authority	TM GALIOTO JM Galioto	6/15/98	Design Agent	JM Galioto	6/15/98
Cog. Eng.	JM Galioto	6/15/98	PE		
Cog. Mgr.	MJ Lee	6-30-98	QA		
QA			Safety		
Safety			Design		
Environ.			Environ.		
Informal Review	MJ Lee	6-10-98	Other		

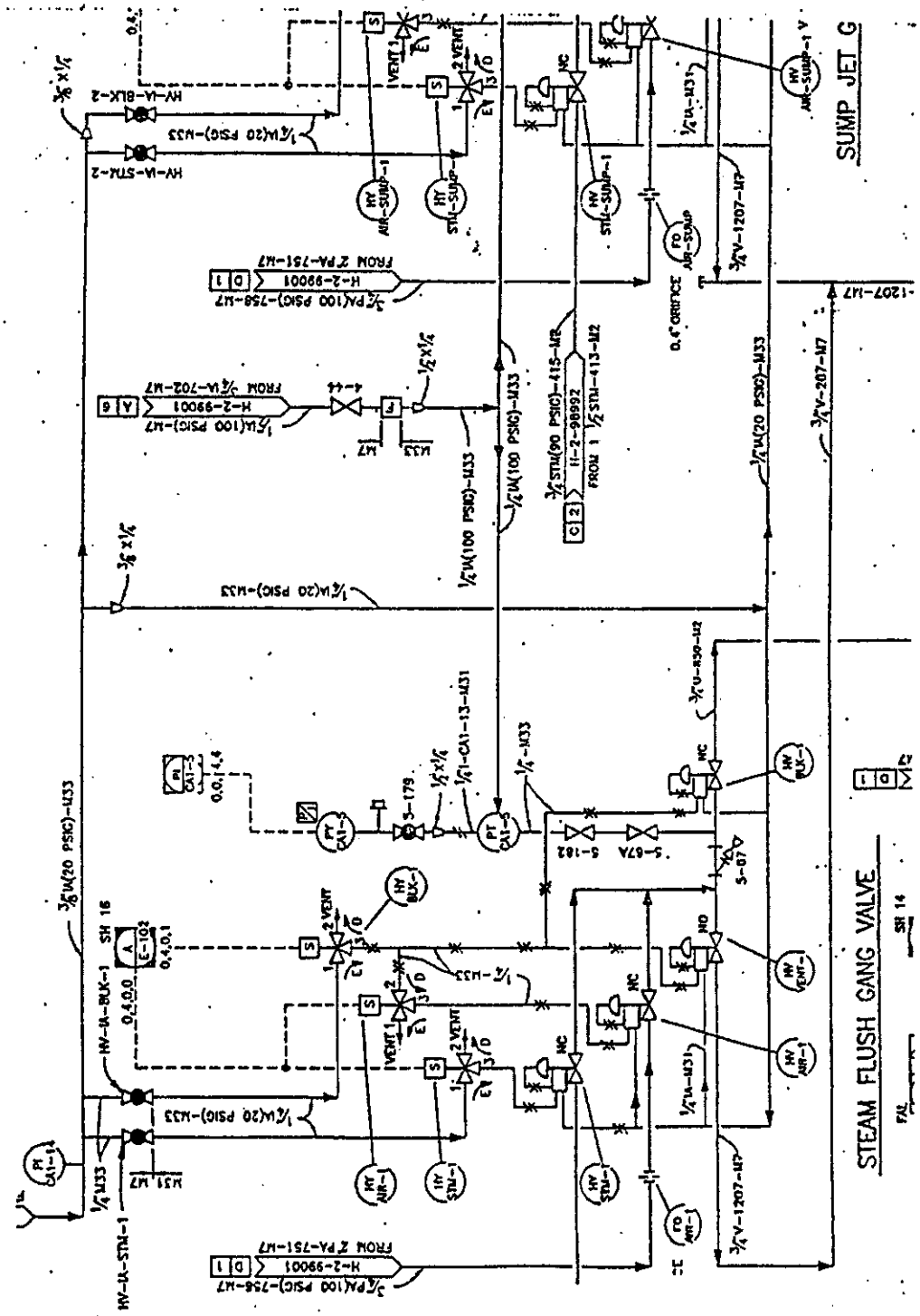
DEPARTMENT OF ENERGY

Signature or a Control Number that tracks the Approval Signature

ADDITIONAL

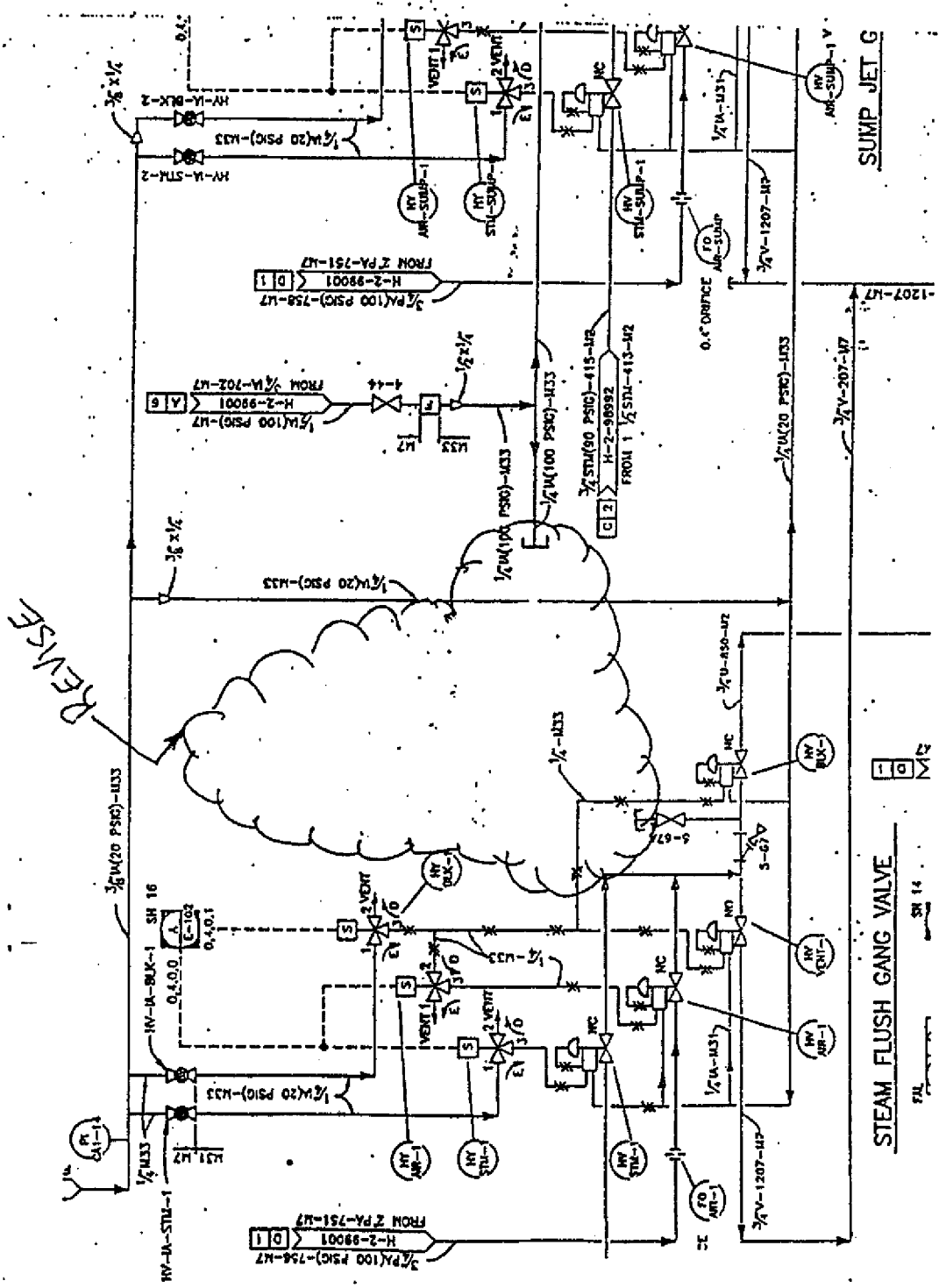
H-2-99002 Sh1 Rev5

WAS



H-2-99002 Sh1 Rev5

IS



Identification Number: LW-98-025	USQ EVALUATION	Page 1 of 3

Title: PT-CA1-5 Modification

Facility: 242-A Evaporator

ECN No. 647885 PCA No.

Work Pkg No. EL-97-00531 Other (Specify)

TITLE: PT-CA1-5 Modification

Description of the proposed activity/reportable occurrence or PIAB:
The pressure transmitter PT-CA1-5 is no longer used or required for process operations. This instrument was the pressure transmitter for the steam flush of the slurry line, and is not working and will be removed. The lines to the pressure transmitter will then be capped.

Introduction: The pressure transmitter was removed for calibration and unable to be calibrated or repaired. It was put into service then and not available for use. This pressure transmitter will be removed and have the lines leading to it capped. The pressure switch and associated equipment will be removed as well. The 242A authorization basis does not describe the details of the pressure transmitters nor does it contain any accidents pertaining to the transmitters.

Scope: This USQ document analyzes the impact of removing the PT-CA1-5 pressure transmitter and its associated equipment.

Authorization basis: The Authorization Basis for the 242-A Evaporator is the *242-A Evaporator Safety Analysis Report*, HNF-SD-WM-SAR-023, Rev. 3 (SAR). The pressure transmitter is included in Table 5-4, which lists the applications of instrument air at the Evaporator. This is the only discussion of the steam flush contained with the SAR.

Steam supply and distribution are discussed in section 5.4.5 of the SAR: Steam flushing is mentioned, but flushing of the slurry line is not specified. This section further states that "Steam supply is not a Safety Class/Safety Significant system nor is it required to mitigate environmental releases".

Compressed air is discussed in Section 5.4.4 of the SAR. This section states that "Compressed air is not a Safety Class or Safety Significant system nor is it required to mitigate environmental releases."

The slurry system is described is section 6.4.1.2. Slurry line flushing is discussed in section 6.4.1.2.9, but only includes flushing with water or a chemical solution from the decontamination header. Flushing using steam is not mentioned.

Conclusion: No DOE approval is necessary. This change may be made at contractor discretion.

Identification Number: LW-98-025	USQ EVALUATION	Page 2 of 3

Title: PT-CA1-5 Modification

References: None outside the Authorization Basis.

1. Does the PROPOSED CHANGE, test, experiment or DISCOVERY increase the probability of occurrence of an accident previously evaluated in the AUTHORIZATION BASIS documentation?
[X] No [ ] Yes/Maybe

BASIS: Accident analysis is contained in Section 9.3 of the SAR. There are no accidents associated with the pressure transmitters or slurry line flushing at the 242A Evaporator. Therefore the proposed change does not increase the probability of an accident previously evaluated in the Authorization basis document.

2. Does the PROPOSED CHANGE, test, experiment or DISCOVERY increase the consequences of an accident previously evaluated in the AUTHORIZATION BASIS documentation?
[X] No [ ] Yes/Maybe

BASIS: Accident analysis is contained in Section 9.3 of the SAR. There are no accidents associated with the pressure transmitters or slurry line flushing at the 242A Evaporator. Therefore the proposed change does not increase the consequences of an accident previously evaluated in the Authorization basis document.

3. Does the PROPOSED CHANGE, test, experiment or DISCOVERY increase the probability of occurrence of a malfunction of EQUIPMENT IMPORTANT TO SAFETY (ITS EQUIPMENT) previously evaluated in the AUTHORIZATION BASIS documentation?
[X] No [ ] Yes/Maybe

BASIS: The Preliminary Hazards Assessment is described in Section 9.2 of the SAR and summarized in Tables 9-4 through 9-8. None of these scenarios rely on slurry line steam flushing or instrumentation associated with steam flushing. Therefore, the proposed change does not increase the probability of a malfunction of ITS equipment as previously evaluated in the Authorization Basis.

4. Does the PROPOSED CHANGE, test, experiment or DISCOVERY increase the consequences of a malfunction of ITS EQUIPMENT previously evaluated in the AUTHORIZATION BASIS documentation?
[X] No [ ] Yes/Maybe

BASIS: The Preliminary Hazards Assessment is described in Section 9.2 of the SAR and summarized in Tables 9-4 through 9-8. None of these scenarios rely on slurry line steam flushing or instrumentation associated with steam flushing. Therefore, the proposed change will have no effect on the consequences of an ITS equipment malfunction.

5. Does the PROPOSED CHANGE, test, experiment or DISCOVERY create the possibility of an accident of a different type than any previously evaluated in the AUTHORIZATION BASIS documentation?
[X] No [ ] Yes/Maybe

BASIS: Steam flushing of the slurry line has not been performed in the recent past, and it is unlikely to be required in the future. As previously stated, neither the steam system nor the compressed air system are required for safety or environmental purposes. As the pressure transmitter is an air operated instrument on a steam line, removal of this instrument cannot create a new type of accident, but rather will decrease the potential for operational upset if the instrument were to malfunction during use.

Identification Number: LW-98-025	USQ EVALUATION	Page 3 of 3

Title: PT-CA1-5 Modification

6. Does the PROPOSED CHANGE, test, experiment or DISCOVERY create the possibility of a malfunction of ITS EQUIPMENT of a different type than any previously evaluated in the AUTHORIZATION BASIS documentation?
[X] No [ ] Yes/Maybe

BASIS: Steam flushing of the slurry line has not be performed in the recent past, and it is unlikely to be required in the future. As previously stated, neither the steam system nor the compressed air system are required for safety or environmental purposes. As the pressure transmitter is an air operated instrument on a steam line, removal of this instrument cannot create a new type of ITS equipment malfunction. It will, however, decrease the potential for operational upset if the instrument were to malfunction during use.

7. Does the PROPOSED CHANGE, test, experiment or DISCOVERY reduce the margin of safety as defined in the basis for any Technical Safety Requirement?
[X] No [ ] Yes/Maybe

BASIS: Operational Safety Requirements (OSRs) and their bases sections are specified in Chapter 11 of the SAR. The proposed change will not decrease the margin of safety for any OSR as described in its basis. There are no OSRs associated with the pressure transmitter or slurry line flushing as defined in the Authorization basis document.

8. Does the PROPOSED CHANGE, test, experiment or DISCOVERY require a new or revised Technical Safety Requirement?
[X] No [ ] Yes/Maybe

BASIS: The removal of the pressure transmitter will have no effect on the OSRs for the 242A Evaporator.

USQE #1 TM GALIOTO (Print Name)

Signature Date: 6-24-98

USQE #2 MD GUTHRIE (Print Name)

Signature Date: 6/24/98

ENGINEERING CHANGE NOTICE

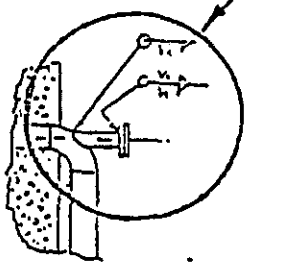
Page 1 of 2

1. ECN 121216
Proj. ECN

2. ECN Category (mark one)	3. Originator's Name, Organization, MSIN, and Telephone No.	4. Date
Supplemental ☐ Direct Revision ☐ Change ECN ☐ Temporary ☐ Supersedure ☒ Discovery ☐ Cancel/Void ☐	N.A. HERTELENDY 82331 S2-02 3-4010 H0-047	3-27-90
5. Project Title/No./Work Order No. REPAIR AHU FIOR DRAIN TF-90-026 WB7CE	6. Bldg./Sys./Fac. No. 242-A	7. Impact Level 3
8. Document Number Affected (include rev. and sheet no.) H-2-69 352 SHT 1 Rev 4	9. Related ECN No(s). ECN 121212	10. Related PO No. —

11a. Modification Work	11b. Work Package Doc. No.	11c. Complete Installation Work	11d. Complete Restoration (Temp. ECN only)
☒ Yes (fill out Blk. 11b) ☐ No (NA Blks. 11b, 11c, 11d)	2E-89-01979/w	Cog. Engineer Signature & Date	Cog. Engineer Signature & Date

12. Description of Change This ECN Supersedes ECN 121212 in its entirety.
Add Flanged off inspection Port to Drain line at the "Elbow", as Shown.



Inspection Port is made of:
4" schedule 40 Black Steel Pipe 8" lng.
Per ASTM A53 Type E GRADE B
150# STEEL Flanges, ONE Blind and ONE SLIP-ON
PER ANSI B16.5 & ASTM A216 GRADE WCB.
Seal (gasket) Garlock Blue Guard 3000
Bolts 3/4" Dia x 3 3/4" lng Per ASTM A307 Grade B
Nuts - Heavy Hex, Per ASTM A563 Grade A

Note: Weld and inspect Per ANSI B31.3
VT All Welds at Final Pass

13a. Justification (mark one)	13b. Justification Details
Criteria Change ☐ Design Improvement ☐ Environmental ☐ As-Found ☐ Facilitate Const. ☒ Const. Error/Omission ☐ Design Error/Omission ☐	The originaly designed "T" Type inspection port could NOT be installed because the 90° Elbow it was to replace, is partialy cast into the wall.

14. Distribution (include name, MSIN, and no of copies)

G.T. Frater	S2-02
N.A. Hertelendy	S2-02
R. Sederburg	R1-51
T. Geary	R1-51
T. Nicholas	R1-51
R. Wurz	S5-04

RELEASE STAMP

OFFICIAL RELEASE (4)
BY WHC
DATE MAR 29 1990
Station 3

A-7900-013 (11 85)

ENGINEERING CHANGE NOTICE

1. ECN (use no. from pg. 1) 121216

15. Design Verification Required	16. Cost Impact ENGINEERING	CONSTRUCTION	17. Schedule Impact (days)
☐ Yes	Additional ☐ $	Additional ☐ $	Improvement ☐
☒ No	Savings ☐ $	Savings ☐ $	Delay ☐

18. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 12. Enter the affected document number in Block 19.

SDD/DD	☐	Seismic/Stress Analysis	☐	Tank Calibration Manual	☐
Functional Design Criteria	☐	Stress/Design Report	☐	Health Physics Procedure	☐
Operating Specification	☐	Interface Control Drawing	☐	Spares Multiple Unit Listing	☐
Criticality Specification	☐	Calibration Procedure	☐	Test Procedures/Specification	☐
Conceptual Design Report	☐	Installation Procedure	☐	Component Index	☐
Equipment Spec.	☐	Maintenance Procedure	☐	ASME Coded Item	☐
Const. Spec.	☐	Engineering Procedure	☐	Human Factor Consideration	☐
Procurement Spec.	☐	Operating Instruction	☐	Computer Software	☐
Vendor Information	☐	Operating Procedure	☐	Electric Circuit Schedule	☐
OM Manual	☐	Operational Safety Requirement	☐	ICRS Procedure	☐
FSAR/SAR	☐	IEFD Drawing	☐	Process Control Manual/Plan	☐
Safety Equipment List	☐	Cell Arrangement Drawing	☐	Process Flow Chart	☐
Radiation Work Permit	☐	Essential Material Specification	☐	Purchase Requisition	☐
Environmental Impact Statement	☐	Fac. Proc. Samp. Schedule	☐	_____	☐
Environmental Report	☐	Inspection Plan	☐	_____	☐
Environmental Permit	☐	Inventory Adjustment Request	☐	_____	☐

19. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

Document Number/Revision	Document Number/Revision	Document Number/Revision

Approvals

	Signature	Date		Signature	Date
OPERATIONS AND ENGINEERING			ARCHITECT-ENGINEER		
X Cog./Project Engineer	[signature]	3/27/90	PE		
X Cog./Project Engr. Mgr.	[signature]	3/27/90	QA		
X QA	[signature]	5/29/90	Safety		
Safety			Design		
Security			Other		
Proj.Prog./Dept. Mgr.					
Def. Reacr. Div.					
Chem. Proc. Div.					
Def. Wst. Mgmt. Div.			DEPARTMENT OF ENERGY		
Adv. React. Dev. Div.					
Proj. Dept.					
Environ. Div.			ADDITIONAL		
IRM Dept.					
Facility Rep. (Ops)					
Other					
[illegible]		5/30/1990			

PDC-214

ENGINEERING CHANGE NOTICE

55/CEN

Page 1 of 2

1. ECN 121238
Proj. ECN

2. ECN Category (mark one)
- Supplemental ☐
- Direct Revision ☐
- Change ECN ☐
- Temporary ☐
- Supersedure ☒
- Discovery ☐
- Cancel/Void ☐

3. Originator's Name, Organization, MSIN, and Telephone No.
N.A. Hertelendy B233 52-02 T-4010
MO-047

4. Date
5-29-90

5. Project Title/No./Work Order No.
Repair AMU Floor Drain
TF-90-026 WBTCE

6. Bldg./Sys./Fac. No.
242-A

7. Impact Level
4

8. Document Number Affected (include rev. and sheet no.)
H-2-69352 SHT-1 REV-4

9. Related ECN No(s).
121237
121216

10. Related PO No.
—

11a. Modification Work
☒ Yes (fill out Blk. 11b)
☐ No (NA Blks. 11b, 11c, 11d)

11b. Work Package Doc. No.
2E-89-01979/0

11c. Complete Installation Work
Cog. Engineer Signature & Date

11d. Complete Restoration (Temp. ECN only)
Cog. Engineer Signature & Date

12. Description of Change
This ECN supersedes ECN 121237 in its entirety and changes ECN 121216 in part.

1.) 150# RF Flange Per ASTM A105 (Was ASTM A-216)

2.) Bolts Should be 5/8" Dia x 3" lng (Was 3/4" Dia x 3 3/4 lng)

3.) Gasket should be 1/8" thk (No thickness was given)

13a. Justification (mark one)
- Criteria Change ☐
- Design Improvement ☐
- Environmental ☐
- As-Found ☐
- Facilitate Const. ☐
- Const. Error/Omission ☐
- Design Error/Omission ☒

13b. Justification Details
Gasket thickness was not given, and Flange type was not identified. This constituted more than 20% change prompting the supersedure

14. Distribution (include name, MSIN, and no of copies)

G.T. Frades 52-02
N.A. Hertelendy 52-02
P.E. Rhodes R1-51

RELEASE STAMP

OFFICIAL RELEASE
BY WHC
DATE MAY 29 1990
Sta. 3
16

A-7900-013 (11/89)

ENGINEERING CHANGE NOTICE

1. ECN (use no. from pg. 1) 12138

15. Design Verification Required	16. Cost Impact		17. Schedule Impact (days)
	ENGINEERING	CONSTRUCTION	
☒ Yes	Additional ☐ $	Additional ☐ $	Improvement ☐
☐ No	Savings ☐ $	Savings ☐ $	Delay ☐

18. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 12. Enter the affected document number in Block 19.

SDD/DD	☐	Seismic/Stress Analysis	☐	Tank Calibration Manual	☐
Functional Design Criteria	☐	Stress/Design Report	☐	Health Physics Procedure	☐
Operating Specification	☐	Interface Control Drawing	☐	Spares Multiple Unit Listing	☐
Criticality Specification	☐	Calibration Procedure	☐	Test Procedures/Specification	☐
Conceptual Design Report	☐	Installation Procedure	☐	Component Index	☐
Equipment Spec.	☐	Maintenance Procedure	☐	ASME Coded Item	☐
Const. Spec.	☐	Engineering Procedure	☐	Human Factor Consideration	☐
Procurement Spec.	☐	Operating Instruction	☐	Computer Software	☐
Vendor Information	☐	Operating Procedure	☐	Electric Circuit Schedule	☐
OM Manual	☐	Operational Safety Requirement	☐	ICRS Procedure	☐
FSAR/SAR	☐	IEFD Drawing	☐	Process Control Manual/Plan	☐
Safety Equipment List	☐	Cell Arrangement Drawing	☐	Process Flow Chart	☐
Radiation Work Permit	☐	Essential Material Specification	☐	Purchase Requisition	☐
Environmental Impact Statement	☐	Fac. Proc. Samp. Schedule	☐	_____	☐
Environmental Report	☐	Inspection Plan	☐	_____	☐
Environmental Permit	☐	Inventory Adjustment Request	☐	_____	☐

19. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

Document Number/Revision	Document Number/Revision	Document Number/Revision

Approvals

	Signature	Date		Signature	Date
OPERATIONS AND ENGINEERING			ARCHITECT-ENGINEER		
X Cog./Project Engineer	Dana E. Young	5-29-90	FE		
X Cog./Project Engr. Mgr.	[illegible]	5-29-90	QA		
QA			Safety		
Safety			Design		
Security			Other		
Proj./Prog./Dept. Mgr.					
Def. React. Div.					
Chem. Proc. Div.					
Def. Wst. Mgmt. Div.			DEPARTMENT OF ENERGY		
Adv. React. Dev. Div.					
Proj. Dept.					
Environ. Div.			ADDITIONAL		
IRM Dept.					
Facility Rep. (Ops)					
Other					
Independent Reviewer					
[illegible]	5/24/90				

FILE COPY

ENGINEERING CHANGE NOTICE — ESSENTIAL

1. ECN 194242

Page 1 of 4

Proj. ECN

ECN Category (mark one)	3. Originator's Name, Organization, MSIN, and Telephone No.	4. Date
Supplemental ☒ / Direct Revision ☐ / Change ECN ☐ / Temporary ☐ / Standby ☐ / Supersedure ☐ / Cancel/Void ☐	P.D. RHODES, W.T.E., S5-10, 3-4730 N1176/70241	12-28-92

5. Project Title/No./Work Order No.	6. Bldg./Sys./Fac. No.	7. Impact Level
DELETE HEPA FILTER IN 2" VENT	242A	(R) 3S

8. Document Numbers Changed by this ECN (includes sheet no. and rev.)	9. Related ECN No(s).	10. Related PO No.
AS LISTED, THIS ECN BLOCK 12	NA	NA

11a. Modification Work	11b. Work Package No.	11c. Modification Work Completed	11d. Restored to Original Condition (Temp. or Standby ECNs only)
☒ Yes (fill out Blk. 11b) ☐ No (NA Blks. 11b, 11c, 11d)	2E -	OCT 20 1995 — Cog. Engineer Signature & Date 10/19/95	N/A — Cog. Engineer Signature & Date

12. Description of Change

H-2-69352 SH. 1 REV. 4 → SEE PAGE 4, THIS ECN.
H-2-69354 SH. 1 REV. 4 → SEE PAGE 3, THIS ECN.
H-2-98995 SH. 1 REV. 3 → SEE PAGE 3, THIS ECN.

FILE COPY

FILE COPY

13a. Justification (mark one)

- Criteria Change ☒
- Design Improvement ☐
- Environmental ☐
- As-Found ☐
- Facilitate Const. ☐
- Design Error/Omission ☐
- Design Error/Omission ☐

13b. Justification Details

2" M24 VENT CHANGED DISCHARGE PER B-534 PROJECT. REF. CHANGE SHOWN ON H-2-99031 SH. 2, SECTION "Q" AND ON H-2-99032 SH. 1, SECTION "Q". HEPA FILTER NO LONGER REQ'D. SINCE AFFECTED 2" VENT LINE NO LONGER VENTS OUTSIDE CONDENSER ROOM.

Distribution (include name, MSIN, and no. of copies)

RHODES — S5-10 — 2
FEARY — R1-43 — 1
[illegible] — S5-15 — 1

RELEASE STAMP

OFFICIAL RELEASE BY WHC (5)
DATE JAN 07 1993

ENGINEERING CHANGE NOTICE

1. ECN (use no. from pg. 1) 194242

Design Verification Required: ☒ Yes ☐ No

16. Cost Impact

	ENGINEERING	CONSTRUCTION
Additional	☐ $ NA	☐ $
Savings	☐ $	☐ $

17. Schedule Impact (d

Improvement ☐ NJ

Delay ☐

18. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 12. Enter the affected document number in Block 19.

SDD/DD	☐	Seismic/Stress Analysis	☐	Tank Calibration Manual	☐
Functional Design Criteria	☐	Stress/Design Report	☐	Health Physics Procedure	☐
Operating Specification	☐	Interface Control Drawing	☐	Spares Multiple Unit Listing	☐
Criticality Specification	☐	Calibration Procedure	☐	Test Procedures/Specification	☐
Conceptual Design Report	☐	Installation Procedure	☐	Component Index	☐
Equipment Spec.	☐	Maintenance Procedure	☐	ASME Coded Item	☐
Const. Spec.	☐	Engineering Procedure	☐	Human Factor Consideration	☐
Procurement Spec.	☐	Operating Instruction	☐	Computer Software	☐
Vendor Information	☐	Operating Procedure	☐	Electric Circuit Schedule	☐
OM Manual	☐	Operational Safety Requirement	☐	ICRS Procedure	☐
FSAR/SAR	☐	IEFD Drawing	☐	Process Control Manual/Plan	☐
Safety Equipment List	☐	Cell Arrangement Drawing	☐	Process Flow Chart	☐
Radiation Work Permit	☐	Essential Material Specification	☐	Purchase Requisition	☐
Environmental Impact Statement	☐	Fac. Proc. Samp. Schedule	☐	_____	☐
Environmental Report	☐	Inspection Plan	☐	_____	☐
Environmental Permit	☐	Inventory Adjustment Request	☐	_____	☐

19. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

Document Number/Revision	Document Number/Revision	Document Number/Revision

20. Approvals

OPERATIONS AND ENGINEERING	Signature	Date
X Cog. Engineer	[signature]	1-7-93
X Cog. Mgr.	[signature]	12/28/92
QA	NA	
NUCL Safety	[signature]	7 JAN 93
Security		
Environ.		
Projects/Programs		
Tank Waste Remediation System		
X Facilities Operations WOSE		
Restoration & Remediation		
Operations & Support Services		
IRM		
X Other INDEPENDENT/INTERNAL REVIEW:	[signature]	12/28/92

ARCHITECT-ENGINEER	Signature	Date
PE		
QA		
Safety		
Design		
Environ.		
Other		

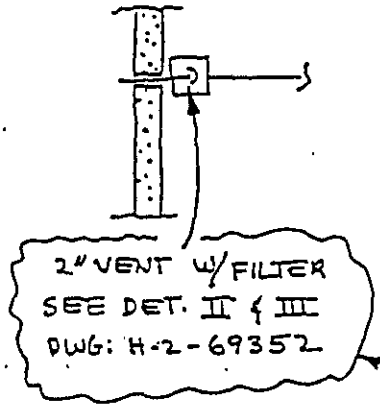
DEPARTMENT OF ENERGY

Signature or Letter Number

ADDITIONAL

ON H-2-69354 (SHT.1) : CO-ORD [D-9] :

WAS :



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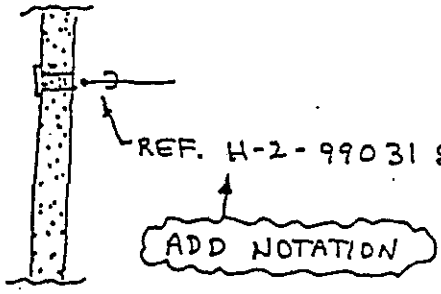
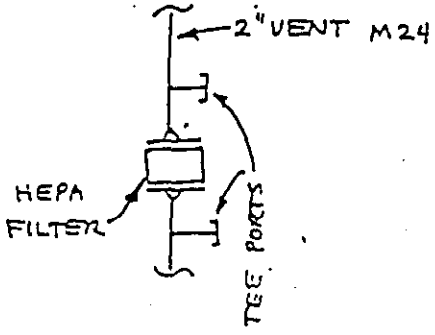


DELETE NOTATION & PORTION OF FILTER BOX.

ON H-2-98995 SHT.1 : CO-ORD [D-5] :

IS :



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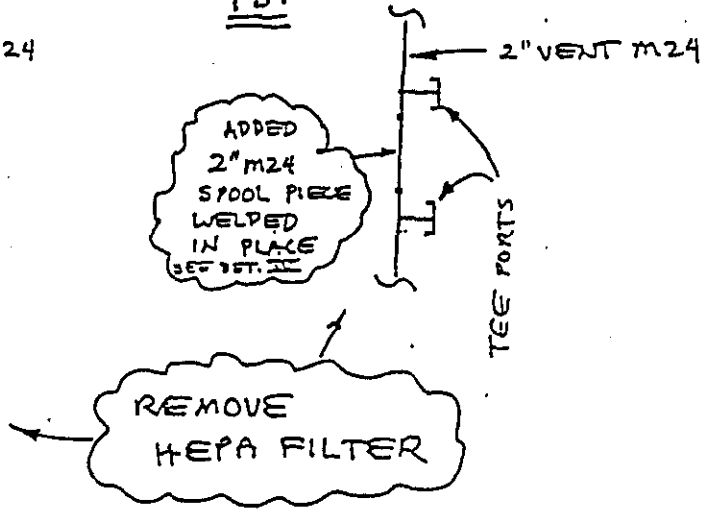


ON H-2-69352 SHT.1 :

@ DETAIL III ← WAS (AS SHOWN)

DELETE DETAIL III ENTIRELY. ← IS

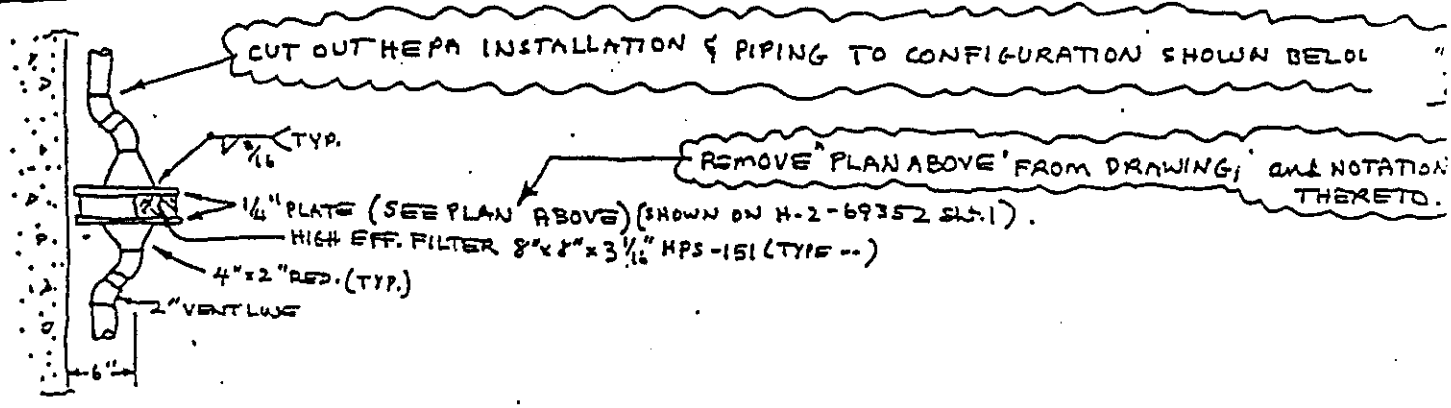
DETAIL II :

CHANGE 2" VENT M24 TO REFLECT REMOVAL OF HEPA FILTER AND NOTATIONS THERETO. STRAIGHT PIPE CONFIGURATIO PER DETAIL IV.

REFERENCE DETAIL IV, THIS ECN

DETAIL IV :

WAS :



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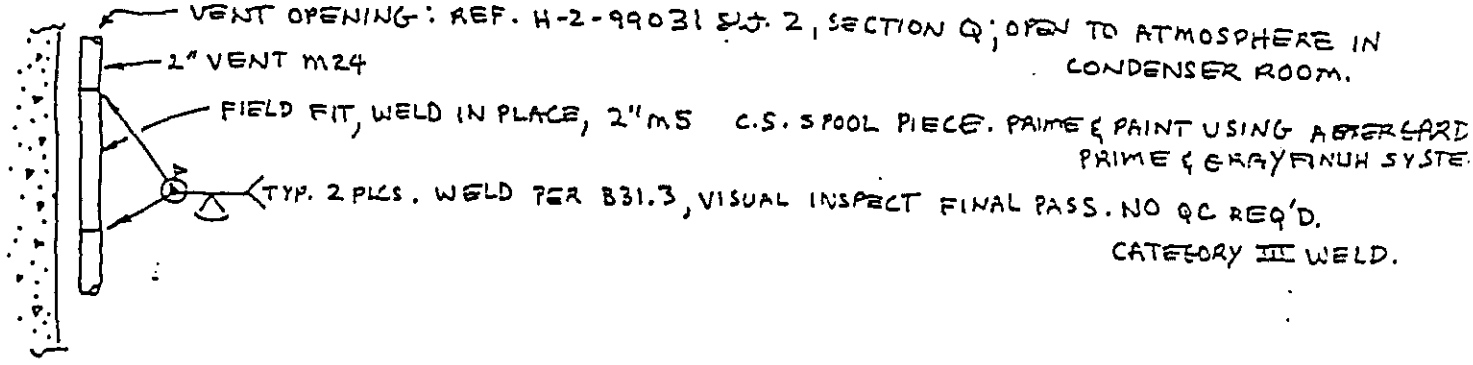


FILE COPY

ENGINEERING CHANGE NOTICE

1. ECN 610629

Page 1 of 46

Proj. ECN

2. ECN Category (mark one)	3. Originator's Name, Organization, MSIN, and Telephone No.	4. Date
Supplemental [X] Direct Revision [] Change ECN [] Temporary [] Standby [] Supersedure [] Cancel/Void []	VA SMITH / 7CF40 / R1-43 / 373-4054 - N1176	10/6/94
	5. Project Title/No./Work Order No.: 242-A EVAPORATOR: C-100 PUMP REPLACEMENT	6. Bldg./Sys./Fac. No.: 242-A /PROCESS CONDENSATE SYS.
		7. Approval Designator: Q 12/7/94
	8. Document Numbers Changed by this ECN (includes sheet no. and rev.): H-2-99031, SHEET 3, REV 1	9. Related ECN No(s.): 610627
		10. Related PO No.: 399810

11a. Modification Work	11b. Work Package No.	11c. Modification Work Complete	11d. Restored to Original Condition (Temp. or Standby ECN only)
[X] Yes (fill out Blk. 11b) [] No (NA Blks. 11b, 11c, 11d)	EE-94-00711	JM Smith 4/17/95 Cog. Engineer Signature & Date APR 17 1995	N/A Cog. Engineer Signature & Date

12. Description of Change

REMOVE EXISTING P-C100 KONTRO PUMP AND REPLACE WITH NEW INGERSOLL-RAND PUMP. THE CHANGE REQUIRES THE REMOVAL OF EXISTING ASSOCIATED PIPING SYSTEMS AND GROUT FROM EXISTING PUMP BASE AND PREPARING EXISTING CEMENT PUMP BASE FOR INSTALLATION OF NEW PUMP AS SHOWN ON SHEETS 3 AND 4 OF THIS ECN.

13a. Justification (mark one)							
Criteria Change	[]	Design Improvement	[X]	Environmental	[]	As-Found	[]
Facilitate Const.	[]	Const. Error/Omission	[]	Design Error/Omission	[]		

13b. Justification Details

TO PROVIDE A MORE RELIABLE PUMP FOR THE OPERATION OF THE 242-A EVAPORATOR.

14. Distribution (include name, MSIN, and no. of copies)

VA SMITH,	R1-43,	(1)		S5-59
DS HARING,	R1-43,	(1)		S5-00
JE GEARY,	S5-14,	(1)		T4-08
RJ NICKLAS,	R1-43,	(1)	IPFH4	S5-85
BS DARLING,	S0-14,	(1)		
T GALIOTO,	R1-43,	(1)		
OG MARKHAN,	S5-09,	(1)		
R.L. THAE	S1-57			

RELEASE STAMP

OFFICIAL RELEASE (2)
BY WHO
DATE DEC 15 1994

A-7900-013-2 (06/94) GEF095

A-7900-013-1 (06/92)

ENGINEERING CHANGE NOTICE

1. ECN (use no. from pg. 1) 610629

15. Design Verification Required	16. Cost Impact				17. Schedule Impact (days)	
	ENGINEERING		CONSTRUCTION			
[X] Yes	Additional	[ ] $	Additional	[ ] $	Improvement	[X]
[ ] No	Savings	[ ] $	Savings	[ ] $	Delay	[ ]

18. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 12. Enter the affected document number in Block 19.

SDD/DD	[ ]	Seismic/Stress Analysis	[ ]	Tank Calibration Manual	[ ]
Functional Design Criteria	[ ]	Stress/Design Report	[ ]	Health Physics Procedure	[ ]
Operating Specification	[ ]	Interface Control Drawing	[ ]	Spares Multiple Unit Listing	[ ]
Criticality Specification	[ ]	Calibration Procedure	[ ]	Test Procedures/Specification	[ ]
Conceptual Design Report	[ ]	Installation Procedure	[ ]	Component Index	[ ]
Equipment Spec.	[ ]	Maintenance Procedure	[ ]	ASME Coded Item	[ ]
Const. Spec.	[ ]	Engineering Procedure	[ ]	Human Factor Consideration	[ ]
Procurement Spec.	[ ]	Operating Instruction	[ ]	Computer Software	[ ]
Vendor Information	[ ]	Operating Procedure	[ ]	Electric Circuit Schedule	[ ]
OM Manual	[ ]	Operational Safety Requirement	[ ]	ICRS Procedure	[ ]
FSAR/SAR	[ ] N/A	IEFD Drawing	[ ]	Process Control Manual/Plan	[ ]
Safety Equipment List	[ ]	Cell Arrangement Drawing	[ ]	Process Flow Chart	[ ]
Radiation Work Permit	[ ]	Essential Material Specification	[ ]	Purchase Requisition	[ ]
Environmental Impact Statement	[ ]	Fac. Proc. Samp. Schedule	[ ]	Tickler File	[ ]
Environmental Report	[ ]	Inspection Plan	[ ]		[ ]
Environmental Permit	[ ]	Inventory Adjustment Request	[ ]		[ ]

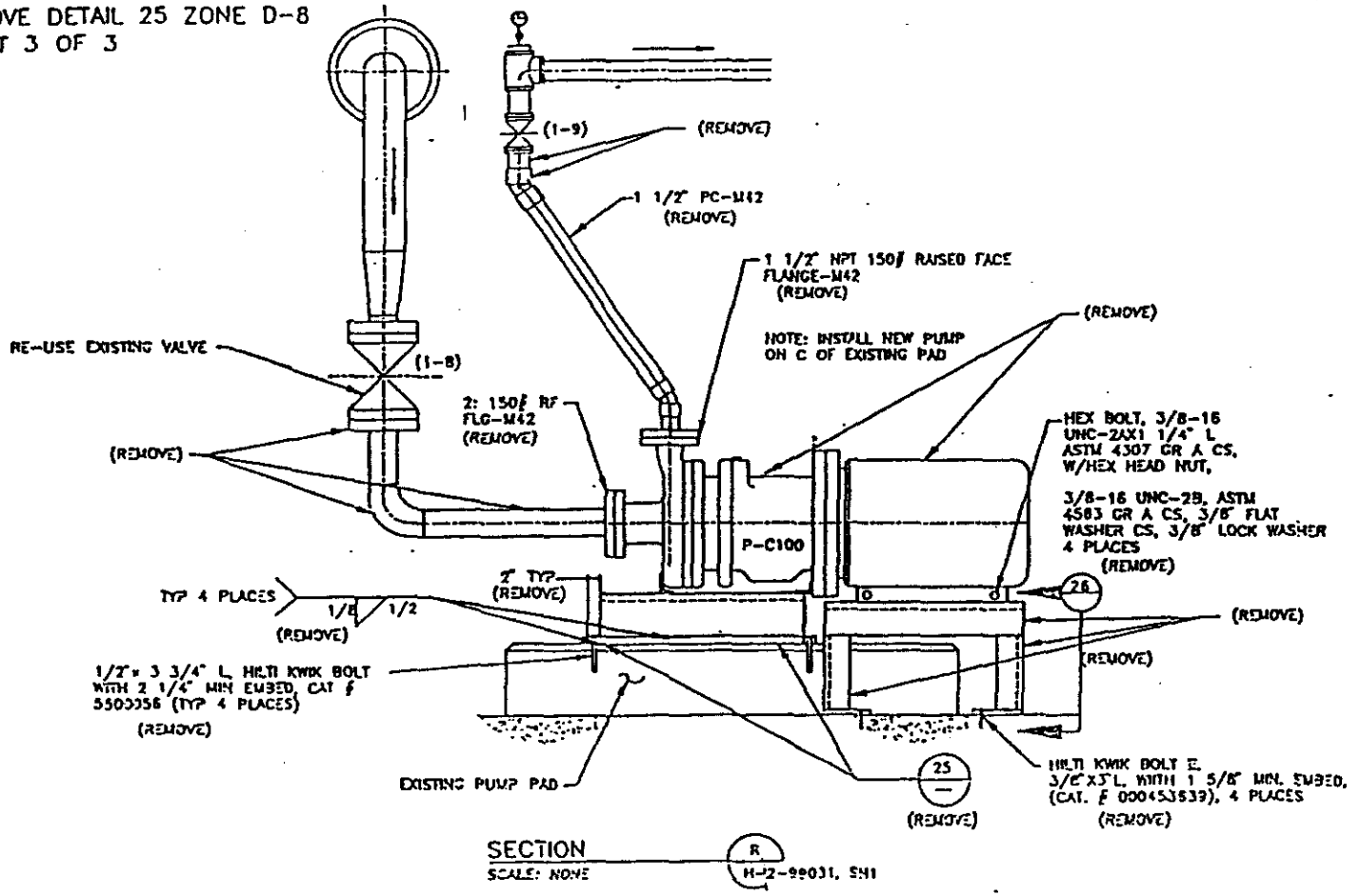
19. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

Document Number/Revision	Document Number/Revision	Document Number Revision
N/A		

20. Approvals

	Signature	Date		Signature	Date
OPERATIONS AND ENGINEERING			ARCHITECT-ENGINEER		
Cog. Eng. VA SMITH	V.A. Smith	11/15/94	PE		
Cog. Mgr. RJ NICKLAS	R.J. Nicklas	12/15/94	QA		
QA R.R. TRUE	R.R. True	12-14-94	Safety		
Safety			Design		
Environ.			Environ.		
Other D HARING	David A. Haring	12/6/94	Other		
			DEPARTMENT OF ENERGY		
			Signature or a Control Number that tracks the Approval Signature		
			ADDITIONAL		

1. REMOVE EXISTING KONTRO PUMP AND ASSOCIATED PIPING AS SHOWN FROM 242-A CONDENSER ROOM BASEMENT
2. REMOVE MOTOR FRAME IN ITS ENTIRETY AS INDICATED AND VIEW (26) FROM FACE OF DRAWING SHOWN IN ZONE F-1 OF SHEET 3 OF 3.
3. REMOVE DETAIL 25 ZONE D-8 SHEET 3 OF 3

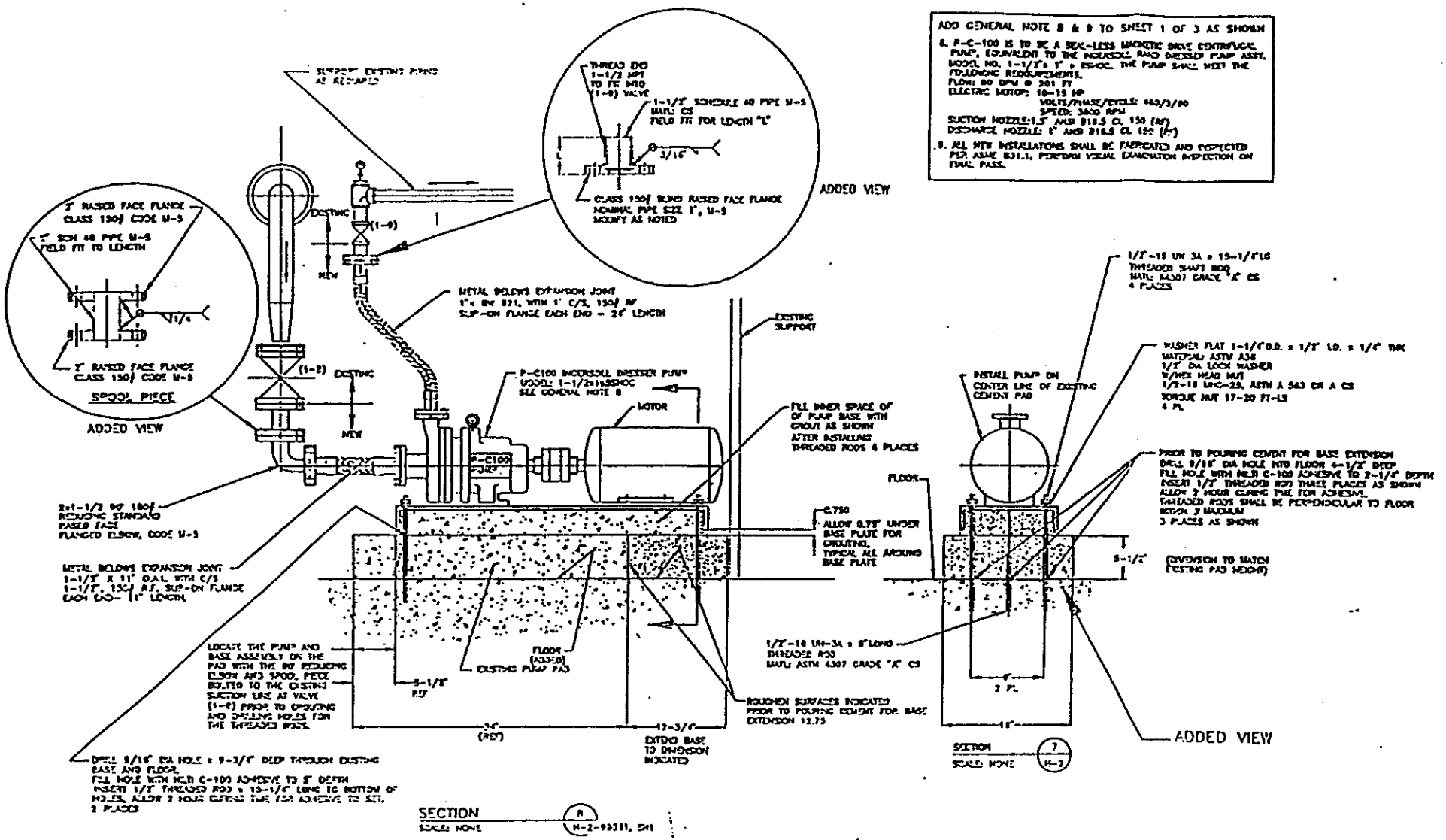


SECTION
SCALE: NONE

R
H-2-99031, SH1

(WAS)

ECN ~~610629~~ 610629
SHEET 3 OF 6



(IS)

ECN ~~61029~~-610629
SHEET 4 OF 6

UNREVIEWED SAFETY QUESTION SAFETY REVIEW FORM (Per WHC-IP-0842, 15.9)	Page 5 of 6

REFERENCE DOCUMENT(S):

ECN No. 610629 PCA No. N/A

Work Pkg No. Other (Specify)

TITLE: REPLACE EXISTING KONTRO C-100 PROCESS CONDENSATE PUMP WITH THE EQUIVALENT INGERSOLL DRESSER PUMP.

BACKGROUND:

The C-100 Process Condensate Pump is used to pump the process condensate from the 242-A Evaporator to the LERF facility.

The existing C-100 Process Condensate Pump manufactured by KONTRO PUMP CO. has a history of failure while operating in the 242-A Evaporator. The failure are the result of a marginal none-coupling design between the electric drive motor and the pump drive shaft and the result of the hard plumbing at the suction and discharge flanges of the pump. This induces torisonal piping loads into the pump body to cause the pump to bind and seize. The installation of the new INGERSOLL DRESSER RAND PUMP with its positive coupling between the electric motor drive and pump drive shaft, combined with flexible bellows at the suction and discharge lines of the pump will eliminate the present hard line plumbing problem to resolve the present pump failure occurrence. The replacement pump will perform the same function as the existing pump.

Does the PROPOSED CHANGE:

A. Represent a change to the facility as described in the AUTHORIZATION BASIS documentation?

[] N/A [X] No [] Yes/Maybe

Basis: The detail design is not discussed in the AUTHORIZATION BASIS, (WHC-SD-WM-SAR-023, Rev 1B, Chap 5 and 11; WHC-SD-SEL-028, Rev 0, Sec 4.1). Replacing the present KONTRO pump with the INGERSOLL pump will improve the reliability of the C-100 pump operation in the 242-A Evaporator, therefore this pump replacement does not represent a change to the facility as described in the AUTHORIZATION BASIS.

B. Represent a change to procedures as described in the AUTHORIZATION BASIS?

[] N/A [X] No [] Yes/Maybe

Basis: This pump replacement will not require any procedure changes to be performed, therefore this pump replacement does not represent a change to procedures described in the AUTHORIZATION BASIS.

C. Represent a test or experiment not described in the AUTHORIZATION BASIS documentation?

[] N/A [X] No [] Yes/Maybe

Basis: This pump replacement does not represent a test or experiment.

D. Does the change impact:

- Implemented OSRs or IOSRs? [] N/A [X] No [] Yes/Maybe
- Approved IOSR Compliance Implementation Plans? [X] N/A [] No [] Yes/Maybe

ECN No. 610629

UNREVIEWED SAFETY QUESTION SAFETY REVIEW FORM (Continued)	Page 6 of 6

Basis: The new INGERSOLL PUMP provides the same function as the existing pump therefore changes to the 242-A LCOs will not be required, (WHC-SD-WM-SAR-023, Rev 1B, Chap 11).

Based on the above, a Safety Evaluation need to be performed for this change [ ] DOES [X] DOES NOT

USQE No. 1 DS Haring
Print Name

David Haring
Signature

12/8/94
Date

USQE No. 2 VA Smith
Print Name

Vincent A Smith
Signature

12/8/94
Date

1PF 4,10 CPF #13b

ENGINEERING CHANGE NOTICE

ESSENTIAL

Page 1 of 7

1. ECN No. 620353

Proj. ECN

2. ECN Category (mark one)	3. Originator's Name, Organization, MSIN, and Telephone No.	3a. USQ Required?	4. Date
Supplemental [ ] Direct Revision [ ] Change ECN [X] Temporary [ ] Standby [ ] Supersedure [ ] Cancel/Void [ ]	TM GALIOTO, WTSE, R1-43, 3-4894	[ ] Yes [X] No	2/25/95
	5. Project Title/No./Work Order No. PC100 PUMP REPLACEMENT	6. Bldg./Sys./Fac. No. 242A/PROCESS COND. SYSTEM	7. Approval Designator NA
	8. Document Numbers Changed by this ECN (includes sheet no. and rev.) SEE BLOCK 12	9. Related ECN No(s). 610629	10. Related PO No.

11a. Modification Work	11b. Work Package No.	11c. Modification Work Complete	11d. Restored to Original Condition (Temp. or Standby ECN only)
[X] Yes (fill out Blk. 11b) [ ] No (NA Blks. 11b, 11c, 11d)	EE-94-711	Cog. Engineer Signature & Date	NA Cog. Engineer Signature & Date

12. Description of Change

ECN #610629 SHEET 4 WILL HAVE THE EXISTING SUPPORT SEPARATED AND MOVED COUNTERCLOCKWISE AROUND THE TANK. ALSO, THE 1" DRAIN LINE WILL BE PLUGGED AND CUTOFF LEVEL WITH THE FLOOR AS SHOWN ON PAGES 3-7 OF THIS ECN.

DRAWINGS ALSO CHANGED BY THIS ECN INCLUDE:
H-2-79865 SH 3,6 REV1
H-2-98995 SH 1 REV6
H-2-69352 SH1 REV4
H-2-69354 SH1 REV4

DRAWINGS INADVERTENTLY LEFT OF BLOCK 8 OF ECN 610629.

13a. Justification (mark one)

Criteria Change	[ ]	Design Improvement	[ ]	Environmental	[ ]	Facility Deactivation	[ ]
As-Found	[X]	Facilitate Const	[ ]	Const. Error/Omission	[ ]	Design Error/Omission	[ ]

13b. Justification Details

THE DELUGE SPRAY RING SUPPORT NEEDS TO BE MOVED TO ALLOW BETTER ACCESS TO THE NEWLY INSTALLED P-C-100 PUMP. THE DRAIN WILL NO LONGER BE NEEDED AND MUST BE ELIMINATED SO THAT NEW PUMP MAY BE INSTALLED AS SHOWN ON ECN 610629.

4/6/16/00

14. Distribution (include name, MSIN, and no. of copies)

DS HARING	R1-43
TM GALIOTO	R1-43
WJ NICKLAS	R1-43
RL BEIREIS	S5-14

RELEASE STAMP

OFFICIAL RELEASE BY WHO (5)

DATE FEB 15 1995

dtw 4

dtw

ENGINEERING CHANGE NOTICE

1. ECN (use no. from pg. 1): 620353

15. Design Verification Required	16. Cost Impact				17. Schedule Impact (days)	
	ENGINEERING		CONSTRUCTION			
[X] Yes	Additional	[] $	Additional	[] $	Improvement	[] NA
[] No	Savings	[] SNA	Savings	[] SNA	Delay	[] NA

18. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 12. Enter the affected document number in Block 19.

SDD/DD	[]	Seismic/Stress Analysis	[]	Tank Calibration Manual	[]
Functional Design Criteria	[]	Stress/Design Report	[]	Health Physics Procedure	[]
Operating Specification	[]	Interface Control Drawing	[]	Spares Multiple Unit Listing	[]
Criticality Specification	[]	Calibration Procedure	[]	Test Procedures/Specification	[]
Conceptual Design Report	[]	Installation Procedure	[]	Component Index	[]
Equipment Spec.	[]	Maintenance Procedure	[]	ASME Coded Item	[]
Const. Spec.	[]	Engineering Procedure	[]	Human Factor Consideration	[]
Procurement Spec.	[]	Operating Instruction	[]	Computer Software	[]
Vendor Information	[]	Operating Procedure	[]	Electric Circuit Schedule	[]
OM Manual	[]	Operational Safety Requirement	[]	ICRS Procedure	[]
FSAR/SAR	[]	IEFD Drawing	[]	Process Control Manual/Plan	[]
Safety Equipment List	[]	Cell Arrangement Drawing	[]	Process Flow Chart	[]
Radiation Work Permit	[]	Essential Material Specification	[]	Purchase Requisition	[]
Environmental Impact Statement	[]	Fac. Proc. Samp. Schedule	[]	Tickler File	[]
Environmental Report	[]	Inspection Plan	[]	NONE	[X]
Environmental Permit	[]	Inventory Adjustment Request	[]		[]

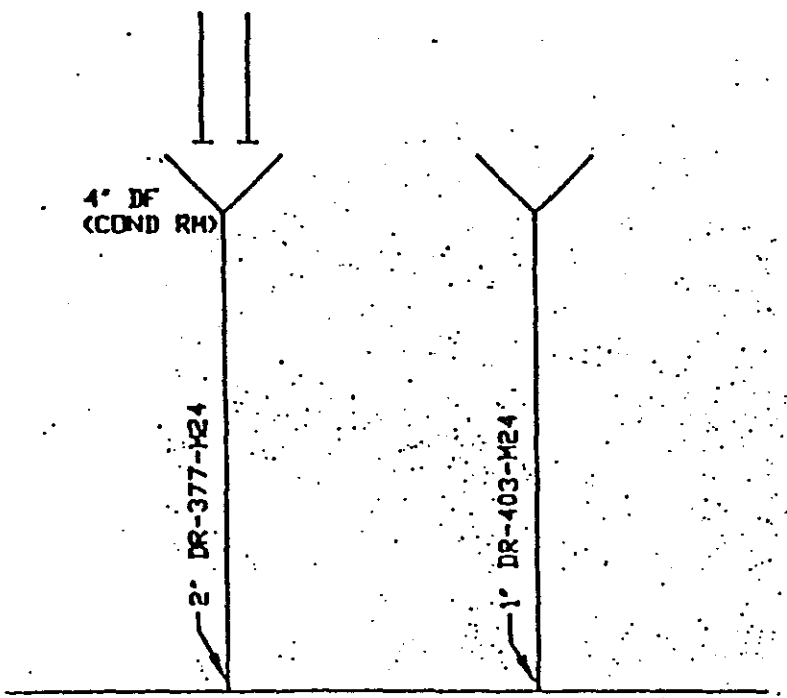
19. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

Document Number/Revision	Document Number/Revision	Document Number/Revision
N/A		

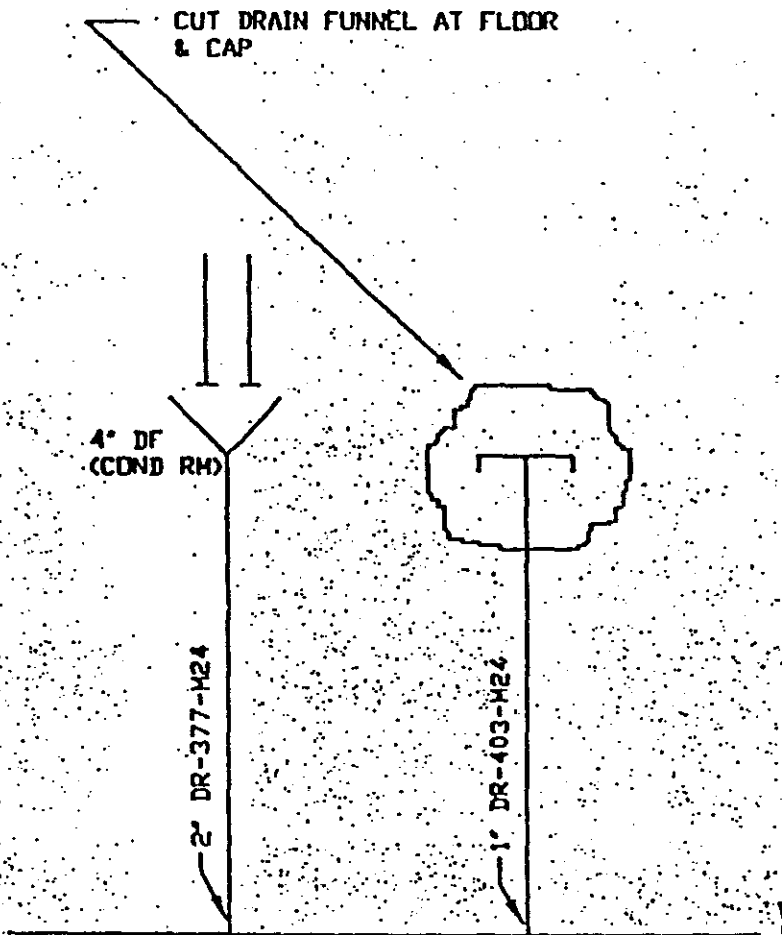
20. Approvals

Signature	Date	Signature	Date
OPERATIONS AND ENGINEERING		ARCHITECT-ENGINEER	
Cog. Eng. [signature]	2/15/95	PE	
Cog. Mgr. [signature] /for RT Nichols	2/16/95	QA	
QA		Safety	
Safety		Design	
Environ.		Environ.	
Other [signature] INFORMA REVIEW	2/15/95	Other	
		DEPARTMENT OF ENERGY	
		Signature or a Control Number that tracks the Approval Signature	
		ADDITIONAL	

\S: H-2-98995, SH 1, REV 6



IS: AS SHOWN



ECN 620353 Sht 3 of 7

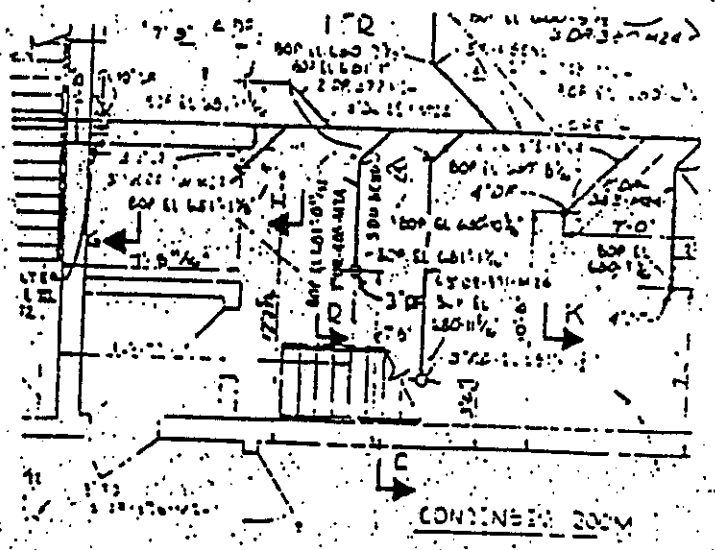
A-7000-01-1

A-7900-013-3 (11/94) GEF096

11-2-69354, Sh 1, Rev 4, Zone D-7

ECN 620353
Sht 4 of 7

WAS:



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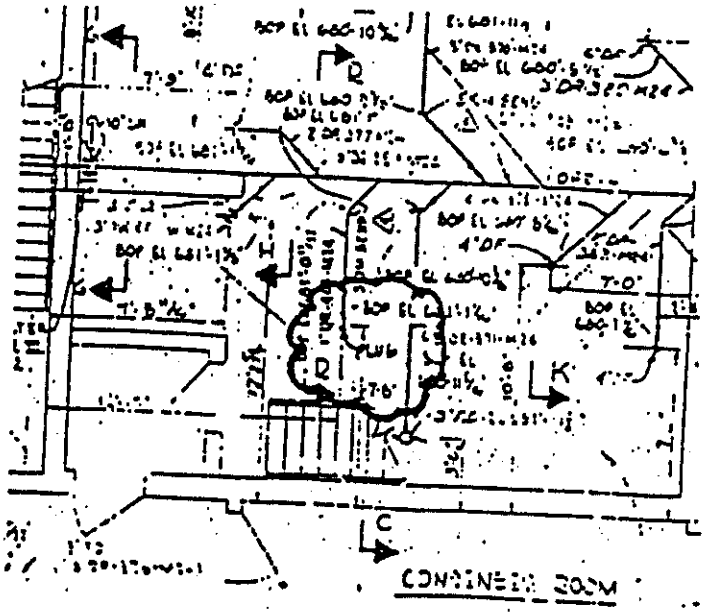
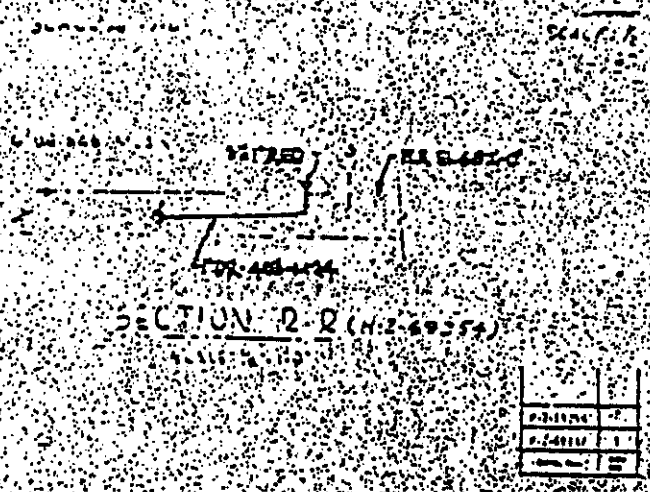


CUT 1" DR-403-M24 OFF AT FLR EL 682'-0", PLUG, AND INDON IN PLACE AS SHOWN BELOW.

H-2-69353, Rev 4, Sh 1, Zone A-B/7-8

WAS:



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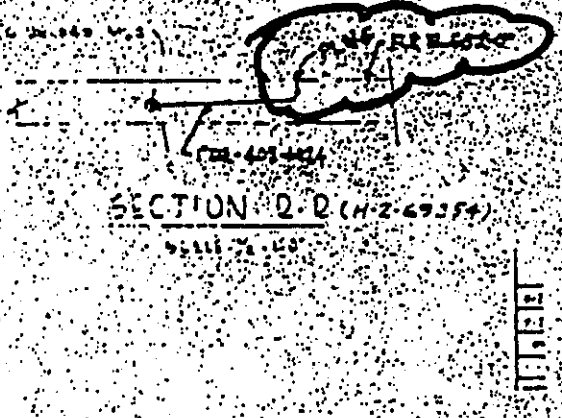
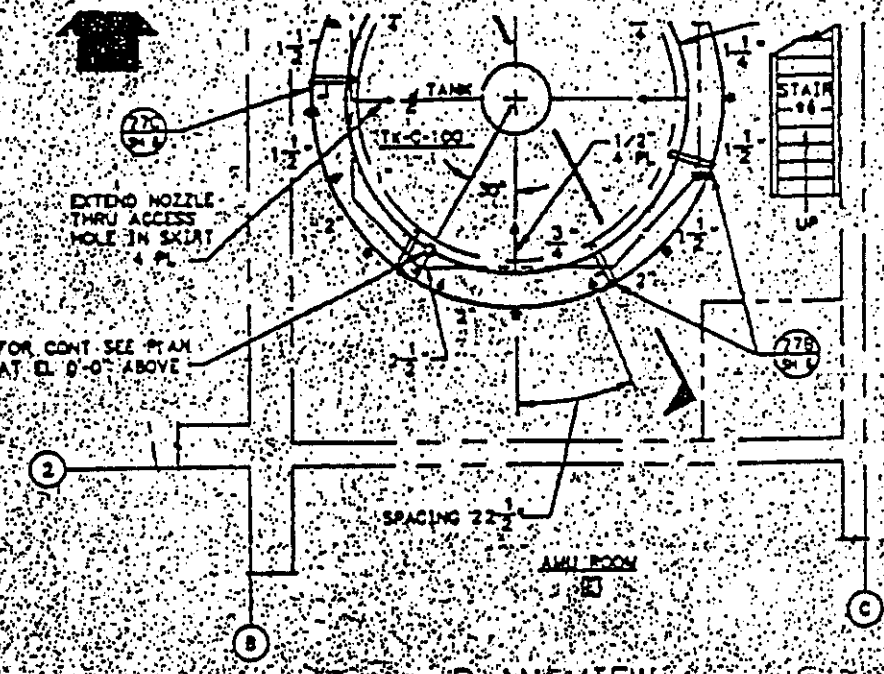


H-2-79865, Sht 3, Rev 1, (Zone A-7):

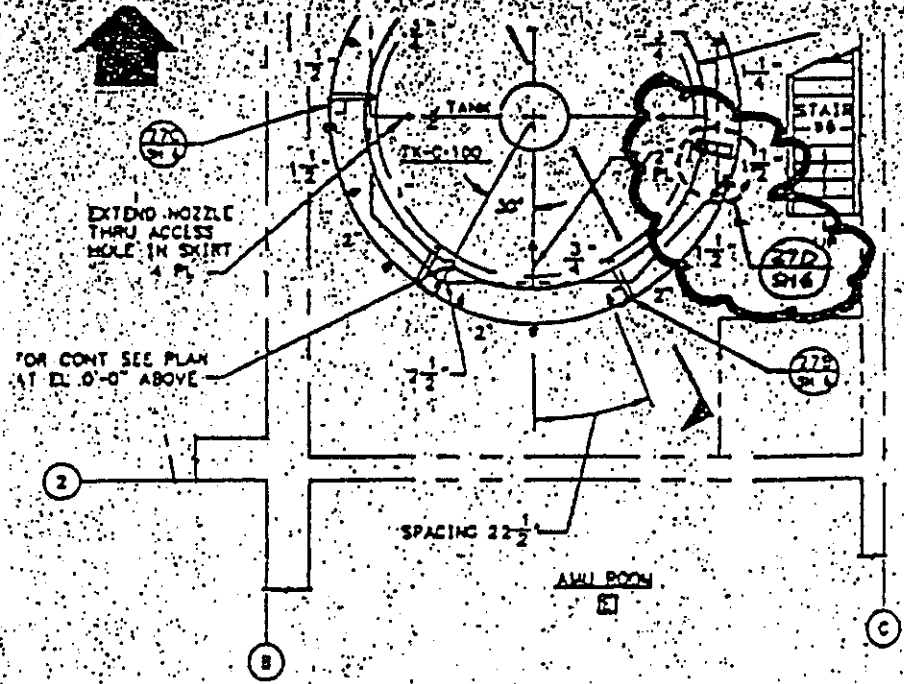
WAS:



PLAN VIEW
CONDENSER ROOM BELOW EL 0'-0"

VIEW SHOWS PIPING FROM -1'-0" TO 0'-0" LEVEL (EL 692'-0"-0"-0")
SCALE 1/4" = 1'-0"

IS: (CUT EXISTING SUPPORT AND RELOCATE BOTTOM DELUGE SYSTEM PIPE SUPPORT AS NECESSARY TO CLEAR P-C100 MOTOR.)

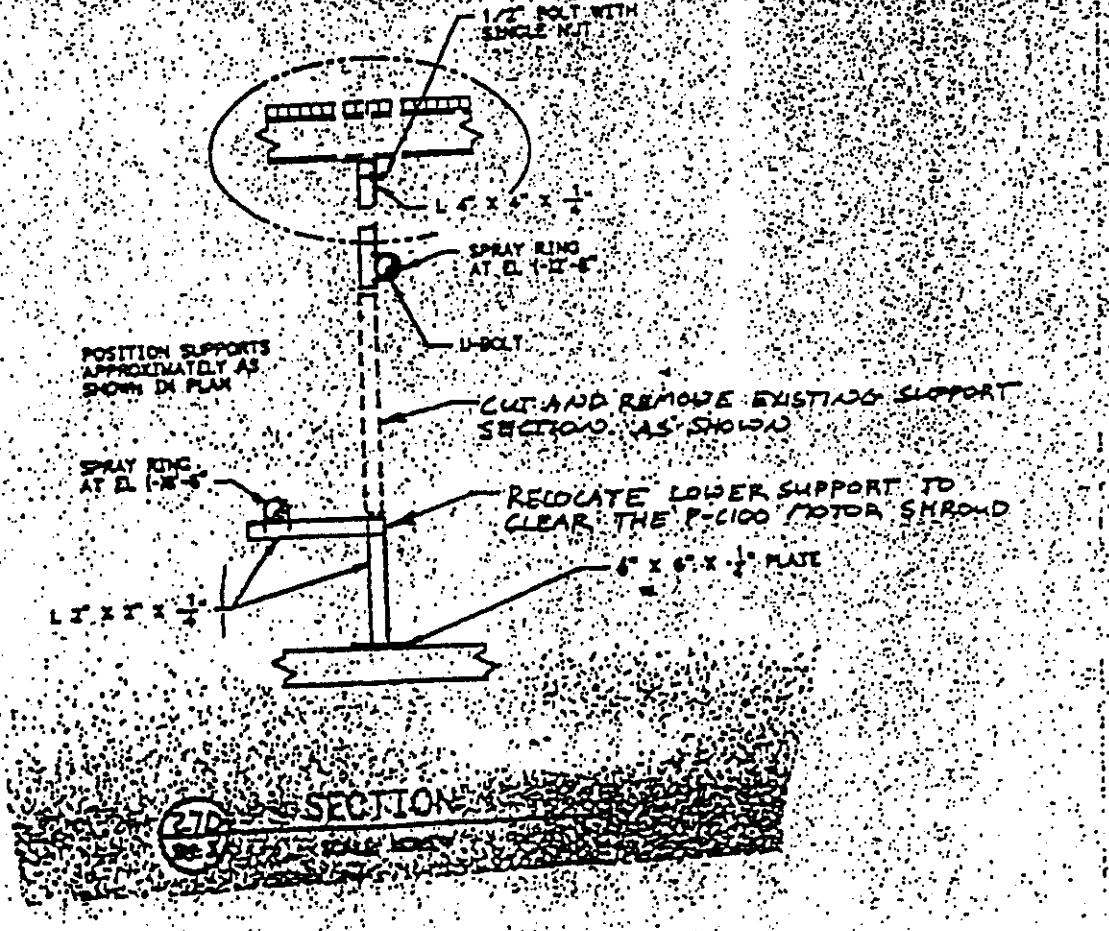


PLAN VIEW
CONDENSER ROOM BELOW EL 0'-0"

VIEW SHOWS PIPING FROM -1'-0" TO 0'-0" LEVEL (EL 692'-0"-0"-0")
SCALE 1/4" = 1'-0"

H-2-79865, Sht 6, Rev. 1

ADD THE FOLLOWING SECTION '27D' TO DRAWING:



REPRODUCTION SERVICES REQUEST

Date Ordered	Date/Time Desired	MILESTONE
3/13/01	3/15/01 Noon ☐ Critical Date	☒ 01882181 No. ECP-01-304

PAYING CUSTOMER HID No. h073846	Name	Cost Center	Company	CACN/COA
	Suzette Thompson	3P100	FH	100018/CA20

ORDERED BY HID No.	Name	Telephone No.
	Same	372-0958

DELIVER TO HID No.	Name	Telephone No.

☐ Call - Will Pickup
☐ Hold - Will Call
☐ Mail - MSIN _____
☐ Mailroom for Distribution
Distribution Date _____

☒ Transportation _____

Complete for Transportation:
Bldg. 1163
Room 235
Area 1100

ITEM 1

Title/Drawing No.(When more than one, list in numerical order)/Description of Originals: LERF ECNs Appendix 4A

Form No. | Rev. Date

Return Originals To: ☐ With Order ☐ Engineering Files ☐ Other _____

No. Originals	No. of Copies Each	Finished Size	Paper Stock/Color	Paper Weight	Ink
	15				

☒ As Is ☐ Two Sided, Head to Head ☐ Mylar Tab Dividers (Off-site) ☐ Provide Blank Backs
☐ One Sided ☐ Two Sided, Head to Foot ☐ Paper Tab Dividers (On-site) No. of Backs _____

☒ Collate ☐ Staple ☐ Tape Bind ☐ Score ☒ Punch
☐ Fold ☐ Upper Left Corner ☐ Comb Bind ☐ Perforate No. Holes 3
☐ Flat ☐ 2 Staples on Left ☐ Screw Post ☐ Pad Center to Center _____
☐ Roll ☐ Saddle Stitch Binding Position _____ ☐ Prenumbering Hole Size _____
Start At _____ Position _____

Additional Instructions for Engineering Reproduction:
☐ Bid Package ☐ Vellum ☐ Blueline ☐ Standard Fold ☐ Fold to Fit In Sleeves
☐ Vault Replacement ☐ Mylar ☐ Blackline ☐ Document Fold ☐ Enlargement/Reduction

Other Instructions: Please do not staple. Thanks.

ITEM 2

Title/Drawing No.(When more than one, list in numerical order)/Description of Originals

Form No. | Rev. Date

Return Originals To: ☐ With Order ☐ Engineering Files ☐ _____

No. Originals	No. of Copies Each	Finished Size	Paper Stock/Color	Paper Weight	Ink

☐ As Is ☐ Two Sided, Head to Head ☐ Mylar Tab Dividers (Off-site) ☐ Provide Blank Backs
☐ One Sided ☐ Two Sided, Head to Foot ☐ Paper Tab Dividers (On-site) No. of Backs _____

☐ Collate ☐ Staple ☐ Tape Bind ☐ Score ☐ Punch
☐ Fold ☐ Upper Left Corner ☐ Comb Bind ☐ Perforate No. Holes _____
☐ Flat ☐ 2 Staples on Left ☐ Screw Post ☐ Pad Center to Center _____
☐ Roll ☐ Saddle Stitch Binding Position _____ ☐ Prenumbering Hole Size _____
Start At _____ Position _____

Additional Instructions for Engineering Reproduction:
☐ Bid Package ☐ Vellum ☐ Blueline ☐ Standard Fold ☐ Fold to Fit In Sleeves
☐ Vault Replacement ☐ Mylar ☐ Blackline ☐ Document Fold ☐ Enlargement/Reduction

Other Instructions:

Hanford Facility RCRA Permit Modification Notification Forms
Part III, Chapter 6 and Attachment 36
325 Hazardous Waste Treatment Units

Index

Hanford Facility RCRA Permit Modification Notification Form

Unit:	Permit Part & Chapter:
325 Hazardous Waste Treatment Units	**Part III, Chapter 6 and Attachment 36**

Description of Modification:

Hanford Facility RCRA Permit, III.6.B.e:

III.6.B.e. Prior to introducing dangerous or mixed waste into ~~Within three (3) months of final installation of~~ the new tank, the Permittee shall submit to Ecology a written integrity assessment, which has been reviewed and certified by an independent, qualified, registered professional engineer, in accordance with WAC 173-303-810 (13)(a).

Modification Class: [1][2][3]	Class 1	Class [1]1	Class 2	Class 3
Please check one of the Classes:		X		

Relevant WAC 173-303-830, Appendix I Modification: A.5.a

Enter wording of the modification from WAC 173-303-830, Appendix I citation

A. General Permit Provisions
   5. Schedule of compliance
      a. Changes in interim compliance dates, with prior approval of the director

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
A.K. Ikenberry Date	R.F. Christensen Date	F. Jamison Date	L.E. Ruud Date

[1] *Class 1 modifications requiring prior Agency approval.*

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.